THE DECENNIAL PUBLICATIONS OF THE UNIVERSITY OF CHICAGO

STUDIES IN LOGICAL THEORY

JOHN DEWEY

EX LIBRIS
WARNER BROWN

WARNER BROWN READING ROOM
DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF CALIFORNIA

Psych Rev XII Davies – Anal of Elem Psychic Process p 174-182
Bosanquet vol I bk 1 p 65 Relation of Time to Judgment.
J of Phil 1907 – Control of Ideas by Facts pp 203 + 2 others.

THE DECENNIAL PUBLICATIONS OF
THE UNIVERSITY OF CHICAGO

THE DECENNIAL PUBLICATIONS

ISSUED IN COMMEMORATION OF THE COMPLETION OF THE FIRST TEN YEARS OF THE UNIVERSITY'S EXISTENCE

AUTHORIZED BY THE BOARD OF TRUSTEES ON THE RECOMMENDATION OF THE PRESIDENT AND SENATE

EDITED BY A COMMITTEE APPOINTED BY THE SENATE

EDWARD CAPPS

STARR WILLARD CUTTING ROLLIN D. SALISBURY

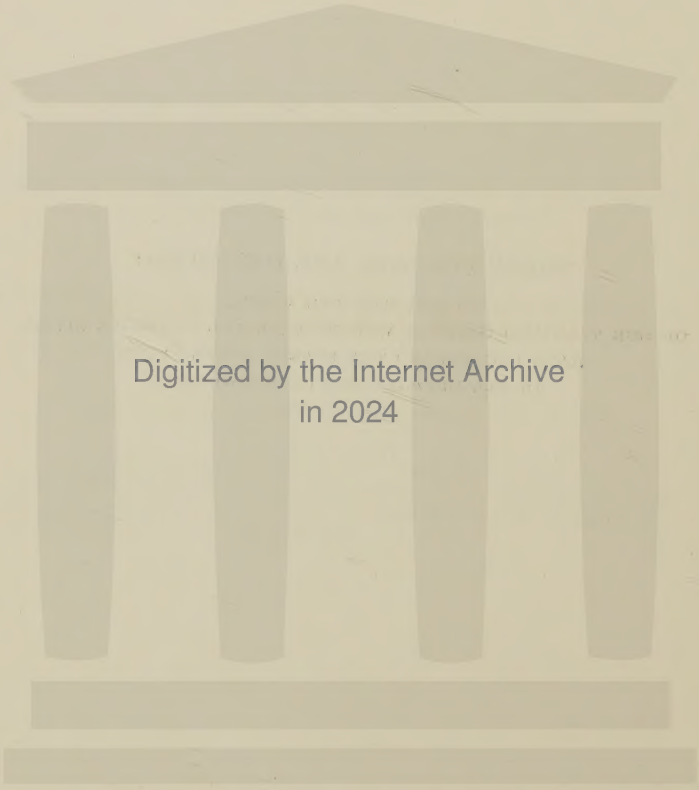
JAMES ROWLAND ANGELL WILLIAM I. THOMAS SHAILER MATHEWS

CARL DARLING BUCK FREDERIC IVES CARPENTER OSKAR BOLZA

JULIUS STIEGLITZ JACQUES LOEB

THESE VOLUMES ARE DEDICATED

TO THE MEN AND WOMEN
OF OUR TIME AND COUNTRY WHO BY WISE AND GENEROUS GIVING
HAVE ENCOURAGED THE SEARCH AFTER TRUTH
IN ALL DEPARTMENTS OF KNOWLEDGE


Digitized by the Internet Archive
in 2024

https://archive.org/details/studiesinlogical0000john_m7t3

STUDIES IN LOGICAL THEORY

STUDIES IN LOGICAL THEORY

BY

JOHN DEWEY

PROFESSOR OF PHILOSOPHY

WITH THE CO-OPERATION OF MEMBERS AND FELLOWS OF THE DEPARTMENT OF PHILOSOPHY

THE DECENNIAL PUBLICATIONS
SECOND SERIES VOLUME XI

CHICAGO
THE UNIVERSITY OF CHICAGO PRESS
1903

Copyright, 1903
BY THE UNIVERSITY OF CHICAGO

PREFACE

This volume presents some results of the work done in the matter of logical theory in the Department of Philosophy of the University of Chicago in the first decade of its existence. The eleven Studies are the work of eight different hands, all, with the exception of the editor, having at some period held Fellowships in this University, Dr. Heidel in Greek, the others in Philosophy. Their names and present pursuits are indicated in the Table of Contents. The editor has occasionally, though rarely, added a footnote or phrase which might serve to connect one Study more closely with another. The pages in the discussion of Hypothesis, on Mill and Whewell, are by him. With these exceptions, each writer is individually and completely responsible for his own Study.

The various Studies present, the editor believes, about the relative amount of agreement and disagreement that is natural in view of the conditions of their origin. The various writers have been in contact with one another in Seminars and lecture courses in pursuit of the same topics, and have had to do with shaping one another's views. There are several others, not represented in this volume, who have also participated in the evolution of the point of view herein set forth, and to whom the writers acknowledge their indebtedness. The disagreements proceed from the diversity of interests with which the different writers approach the logical topic; and from the fact that the point of view in question is still (happily) developing and showing no signs of becoming a closed system.

If the Studies themselves do not give a fair notion of the

nature and degree of the harmony in the different writers' methods, a preface is not likely to succeed in so doing. A few words may be in place, however, about a matter repeatedly touched upon, but nowhere consecutively elaborated—the more ultimate philosophical bearing of what is set forth. All agree, the editor takes the liberty of saying, that judgment is the central function of knowing, and hence affords the central problem of logic; that since the act of knowing is intimately and indissolubly connected with the like yet diverse functions of affection, appreciation, and practice, it only distorts results reached to treat knowing as a self-inclosed and self-explanatory whole—hence the intimate connections of logical theory with functional psychology; that since knowledge appears as a function within experience, and yet passes judgment upon both the processes and contents of other functions, its work and aim must be distinctively reconstructive or transformatory; that since Reality must be defined in terms of experience, judgment appears accordingly as the medium through which the consciously effected evolution of Reality goes on; that there is no reasonable standard of truth (or of success of the knowing function) in general, except upon the postulate that Reality is thus dynamic or self-evolving, and, in particular, except through reference to the specific offices which knowing is called upon to perform in readjusting and expanding the means and ends of life. And all agree that this conception gives the only promising basis upon which the working methods of science, and the proper demands of the moral life, may co-operate. All this, doubtless, does not take us very far on the road to detailed conclusions, but it is better, perhaps, to get started in the right direction than to be so definite as to erect a dead-wall in the way of farther movement of thought.

In general, the obligations in logical matters of the writers

are roughly commensurate with the direction of their criticisms. Upon the whole, most is due to those whose views are most sharply opposed. To Mill, Lotze, Bosanquet, and Bradley the writers then owe special indebtedness. The editor acknowledges personal indebtedness to his present colleagues, particularly to Mr. George H. Mead, in the Faculty of Philosophy, and to a former colleague, Dr. Alfred H. Lloyd, of the University of Michigan. For both inspiration and the forging of the tools with which the writers have worked there is a pre-eminent obligation on the part of all of us to William James, of Harvard University, who, we hope, will accept this acknowledgment and this book as unworthy tokens of a regard and an admiration that are coequal.

TABLE OF CONTENTS

I. Thought and its Subject-Matter - - - - - 1
By John Dewey

II. Thought and its Subject-Matter: The Antecedents of Thought - - - - - - - - - - - 23
By John Dewey

III. Thought and its Subject-Matter: The Datum of Thinking - - - - - - - - - - - 49
By John Dewey

IV. Thought and its Subject-Matter: The Content and Object of Thought - - - - - - - - - 65
By John Dewey

V. Bosanquet's Theory of Judgment - - - - - 86
By Helen Bradford Thompson, Ph.D., Director of the Psychological Laboratory of Mount Holyoke College

VI. Typical Stages in the Development of Judgment - 127
By Simon Fraser McLennan, Ph.D., Professor of Philosophy in Oberlin College

VII. The Nature of Hypothesis - - - - - - - 142
By Myron Lucius Ashley, Ph.D., Instructor, American Correspondence School

VIII. Image and Idea in Logic - - - - - - - - 183
By Willard Clark Gore, Ph.D., Assistant Professor of Psychology in the University of Chicago

IX. The Logic of the Pre-Socratic Philosophy - - 203
By William Arthur Heidel, Ph.D., Professor of Latin in Iowa College

X. Valuation as a Logical Process - - - - - 227
By Henry Waldgrave Stuart, Ph.D., Instructor in Philosophy in the State University of Iowa

XI. Some Logical Aspects of Purpose - - - - - 341
By Addison Webster Moore, Ph.D., Assistant Professor of Philosophy in the University of Chicago

I

THOUGHT AND ITS SUBJECT-MATTER: THE GENERAL PROBLEM OF LOGICAL THEORY

No one doubts that thought, at least reflective, as distinct from what is sometimes called constitutive, thought, is derivative and secondary. It comes after something and out of something, and for the sake of something. No one doubts that the thinking of everyday practical life and of science is of this reflective type. We think about; we reflect over. If we ask what it is which is primary and radical to thought; if we ask what is the final objective for the sake of which thought intervenes; if we ask in what sense we are to understand thought as a derived procedure, we are plunging ourselves into the very heart of the logical problem: the relation of thought to its empirical antecedents and to its consequent, truth, and the relation of truth to reality.

Yet from the naïve point of view no difficulty attaches to these questions. The antecedents of thought are our universe of life and love; of appreciation and struggle. We think about anything and everything: snow on the ground; the alternating clanks and thuds that rise from below; the relation of the Monroe Doctrine to the embroglio in Venezuela; the relation of art to industry; the poetic quality of a painting by Botticelli; the battle of Marathon; the economic interpretation of history; the proper definition of cause; the best method of reducing expenses; whether and how to renew the ties of a broken friendship; the interpretation of an equation in hydrodynamics; etc.

Through the madness of this miscellaneous citation there appears so much of method: anything—event, act, value,

ideal, person, or place—may be an object of thought. Reflection busies itself alike with physical nature, the record of social achievement, and the endeavors of social aspiration. It is with reference to *such* affairs that thought is derivative; it is with reference to them that it intervenes or mediates. Taking some part of the universe of action, of affection, of social construction, under its special charge, and having busied itself therewith sufficiently to meet the special difficulty presented, thought releases that topic and enters upon further more direct experience.

Sticking for a moment to this naïve standpoint, we recognize a certain rhythm of direct practice and derived theory; of primary construction and of secondary criticism; of living appreciation and of abstract description; of active endeavor and of pale reflection. We find that every more direct primary attitude passes upon occasion into its secondary deliberative and discursive counterpart. We find that when the latter has done its work it passes away and passes on. From the naïve standpoint such rhythm is taken as a matter of course. There is no attempt to state either the nature of the occasion which demands the thinking attitude, nor to formulate a theory of the standard by which is judged its success. No general theory is propounded as to the exact relationship between thinking and what antecedes and succeeds it. Much less do we ask how empirical circumstances can generate rationality of thought; nor how it is possible for reflection to lay claim to power of determining truth and thereby of constructing further reality.

If we were to ask the thinking of naïve life to present, with a minimum of theoretical elaboration, its conception of its own practice, we should get an answer running not unlike this: Thinking is a kind of activity which we perform at specific need, just as at other need we engage in other sorts of activity : as converse with a friend; draw a plan for a house;

take a walk; eat a dinner; purchase a suit of clothes; etc., etc. In general, its material is anything in the wide universe which seems to be relevant to this need — anything which may serve as a resource in defining the difficulty or in suggesting modes of dealing effectively with it. The measure of its success, the standard of its validity, is precisely the degree in which the thinking actually disposes of the difficulty and allows us to proceed with more direct modes of experiencing, that are forthwith possessed of more assured and deepened value.

If we inquire why the naïve attitude does not go on to elaborate these implications of its own practice into a systematic theory, the answer, on its own basis, is obvious. Thought arises in response to its own occasion. And this occasion is so exacting that there is time, as there is need, only to do the thinking which is needed in that occasion — not to reflect upon the thinking itself. Reflection follows so naturally upon its appropriate cue, its issue is so obvious, so practical, the entire relationship is so organic, that once grant the position that thought arises in reaction to specific demand, and there is not the particular type of thinking called logical theory because there is not the practical demand for reflection of that sort. Our attention is taken up with particular questions and specific answers. What we have to reckon with is not the problem of, How can I think *überhaupt?* but, How shall I think right *here and now?* Not what is the test of thought at large, but what validates and confirms *this* thought?

In conformity with this view, it follows that a generic account of our thinking behavior, the generic account termed logical theory, arises at historic periods in which the situation has lost the organic character above described. The general theory of reflection, as over against its concrete exercise, appears when occasions for reflection are so over-

whelming and so mutually conflicting that specific adequate response in thought is blocked. Again, it shows itself when practical affairs are so multifarious, complicated, and remote from control that thinking is held off from successful passage into them.

Anyhow (sticking to the naïve standpoint), it is true that the stimulus to that particular form of reflective thinking termed logical theory is found when circumstances require the act of thinking and nevertheless impede clear and coherent thinking in detail; or when they occasion thought and then prevent the results of thinking from exercising directive influence upon the immediate concerns of life. Under these conditions we get such questions as the following: What is the relation of rational thought to crude or unreflective experience? What is the relation of thought to reality? What is the barrier which prevents reason from complete penetration into the world of truth? What is it that makes us live alternately in a concrete world of experience in which thought as such finds not satisfaction, and in a world of ordered thought which is yet only abstract and ideal?

It is not my intention here to pursue the line of historical inquiry thus suggested. Indeed, the point would not be mentioned did it not serve to fix attention upon the nature of the logical problem.

It is in dealing with this latter type of questions that logical theory has taken a turn which separates it widely from the theoretical implications of practical deliberation and of scientific research. The two latter, however much they differ from each other in detail, agree in a fundamental principle. They both assume that every reflective problem and operation arises with reference to some *specific* situation, and has to subserve a *specific* purpose dependent upon its own occasion. They assume and observe distinct limits—limits from which and to which. There is the limit of origin

in the needs of the particular situation which evokes reflection. There is the limit of terminus in successful dealing with the particular problem presented—or in retiring, baffled, to take up some other question. The query that at once faces us regarding the nature of logical theory is whether reflection upon reflection shall recognize these limits, endeavoring to formulate them more exactly and to define their relationships to each other more adequately; or shall it abolish limits, do away with the matter of specific conditions and specific aims of thought, and discuss thought and its relation to empirical antecedents and rational consequents (truth) at large?

At first blush, it might seem as if the very nature of logical theory as generalization of the reflective process must of necessity disregard the matter of particular conditions and particular results as irrelevant. How, the implication runs, could reflection become generalized save by elimination of details as irrelevant? Such a conception in fixing the central problem of logic fixes once for all its future career and material. The essential business of logic is henceforth to discuss the relation of thought as such to reality as such. It may, indeed, involve much psychological material, particularly in the discussion of the processes which antecede thinking and which call it out. It may involve much discussion of the concrete methods of investigation and verification employed in the various sciences. It may busily concern itself with the differentiation of various types and forms of thought—different modes of conceiving, various conformations of judgment, various types of inferential reasoning. But it concerns itself with any and all of these three fields, not on their own account or as ultimate, but as subsidiary to the main problem: the relation of thought as such, or at large, to reality as such, or at large. Some of the detailed considerations referred to may throw light upon the terms under which thought transacts its business with reality; upon, say, certain peculiar

limitations it has to submit to as best it may. Other considerations throw light upon the ways in which thought gets at reality. Still other considerations throw light upon the forms which thought assumes in attacking and apprehending reality. But in the end all this is incidental. In the end the one problem holds: How do the specifications of thought as such hold good of reality as such? In fine, logic is supposed to grow out of the epistemological inquiry and to lead up to its solution.

From this point of view various aspects of logical theory are well stated by an author whom later on we shall consider in some detail. Lotze[1] refers to "universal forms and principles of thought which hold good everywhere both in judging of reality and in weighing possibility, *irrespective of any difference in the objects.*" This defines the business of *pure* logic. This is clearly the question of thought as such — of thought at large or in general. Then we have the question "of how far the most complete structure of thought . . . . can claim to be an adequate account of that which we seem compelled to assume as the object and occasion of our ideas." This is clearly the question of the relation of thought at large to reality at large. It is epistemology. Then comes "applied logic," having to do with the actual employment of concrete forms of thought with reference to investigation of specific topics and subjects. This "applied" logic would, if the standpoint of practical deliberation and of scientific research were adopted, be the sole genuine logic. But the existence of thought *in itself* having been agreed upon, we have in this "applied" logic only an incidental inquiry of how the particular resistances and oppositions which "pure" thought meets from particular matters may best be discounted. It is concerned with methods of investigation which obviate defects in the relationship of thought at

[1] *Logic* (translation, Oxford, 1888), Vol. I, pp. 10, 11. Italics mine.

large to reality at large, as these present themselves under the limitations of human experience. It deals merely with hindrances, and with devices for overcoming them; it is directed by considerations of utility. When we reflect that this field includes the entire procedure of practical deliberation and of concrete scientific research, we begin to realize something of the significance of the theory of logic which regards the limitations of specific origination and specific outcome as irrelevant to its main problem, which assumes an activity of thought "pure" or "in itself," that is, "irrespective of any difference in its objects."

This suggests, by contrast, the opposite mode of stating the problem of logical theory. Generalization of the nature of the reflective process certainly involves elimination of much of the specific material and contents of the thought-situations of daily life and of critical science. Quite compatible with this, however, is the notion that it seizes upon *certain* specific conditions and factors, and aims to bring them to clear consciousness—not to abolish them. While eliminating the particular material of particular practical and scientific pursuits, (1) it may strive to hit upon the common denominator in the various situations which are antecedent or primary to thought and which evoke it; (2) it may attempt to show how typical features in the specific antecedents of thought call out to diverse typical modes of thought-reaction; (3) it may attempt to state the nature of the specific consequences in which thought fulfils its career.

(1) It does not eliminate dependence upon specific occasions as provocative of thought; but endeavors to define *what* in the various situations constitutes them thought-provoking. The specific occasion is not eliminated, but insisted upon and brought into the foreground. Consequently psychological considerations are not subsidiary incidents, but of essential importance so far as they enable us to trace

the generation of the thought-situation. (2) So from this point of view the various types and modes of conceiving, judging, and inference are treated, not as qualifications of thought *per se* or at large, but of thought engaged in its specific, most economic, effective response to its own particular occasion; they are adaptations for control of stimuli. The distinctions and classifications that have been accumulated in "formal" logic are relevant data; but they demand interpretation from the standpoint of use as organs of adjustment to material antecedents and stimuli. (3) Finally the question of validity, or ultimate objective of thought, is relevant; but is such as a matter of the specific issue of the specific career of a thought-function. All the typical investigatory and verificatory procedures of the various sciences are inherently concerned as indicating the ways in which thought actually brings itself to its own successful fulfilment in dealing with various types of problems.

While the epistemological type of logic may, as we have seen, leave (under the name of applied logic), a subsidiary place open for the instrumental type, the type which deals with thinking as a specific procedure relative to a specific antecedent occasion and to a subsequent specific fulfilment, is not able to reciprocate the favor. From its point of view, an attempt to discuss the antecedents, data, forms, and objective of thought, apart from reference to particular position occupied, and particular part played in the growth of experience is to reach results which are not so much either true or false as they are radically meaningless — because they are considered apart from limits. Its results are not only abstractions (for all theorizing ends in abstractions), but abstractions without possible reference or bearing. From this point of view, the taking of something, whether that something be thinking activity, its empirical condition, or its objective goal, apart from the limits of a historic or devel-

oping situation, is the essence of *metaphysical* procedure—in the sense of metaphysics which makes a gulf between it and science.

As the reader has doubtless anticipated, it is the object of this chapter to present the problem and industry of reflective thought from this latter point of view. I recur again to the standpoint of naïve experience, using the term in a sense wide enough to cover both practical procedure and concrete scientific research. I resume by saying that this point of view knows no fixed distinction between the empirical values of unreflective life and the most abstract process of rational thought. It knows no fixed gulf between the highest flight of theory and control of the details of practical construction and behavior. It passes, according to the occasion and opportunity of the moment, from the attitude of loving and struggling and doing to that of thinking and the reverse. Its contents or material shift their values back and forth from technological or utilitarian to æsthetic, ethic, or affectional. It utilizes data of perception or of discursive ideation as need calls, just as an inventor now utilizes heat, now mechanical strain, now electricity, according to the demands set by his aim. From this point of view, more definite logical import is attached to our earlier statements (p. 2) regarding the possibility of taking anything in the universe of experience as subject-matter of thought. Anything from past experience may be taken which appears to be an element in either the statement or the solution of the present problem. Thus we understand the coexistence without contradiction of an indeterminate possible field and a limited actual field. The undefined set of means becomes specific through reference to an end.

In all this, there is no difference of kind between the methods of science and those of the plain man. The difference is the greater control in science of the statement of the prob-

lem, and of the selection and use of relevant material, both sensible or ideational. The two are related to each other just as the hit-or-miss, trial-and-error inventions of uncivilized man stand to the deliberate and consecutively persistent efforts of a modern inventor to produce a certain complicated device for doing a comprehensive piece of work. Neither the plain man nor the scientific inquirer is aware, as he engages in his reflective activity, of any transition from one sphere of existence to another. He knows no two fixed worlds — reality on one side and mere subjective ideas on the other; he is aware of no gulf to cross. He assumes uninterrupted, free, and fluid passage from ordinary experience to abstract thinking, from thought to fact, from things to theories and back again. Observation passes into development of hypothesis; deductive methods pass to use in description of the particular; inference passes into action with no sense of difficulty save those found in the particular task in question. The fundamental assumption is *continuity* in and of experience.

This does not mean that fact is confused with idea, or observed datum with voluntary hypothesis, theory with doing, any more than a traveler confuses land and water when he journeys from one to the other. It simply means that each is placed and used with reference to service rendered the other, and with reference to future use of the other.

Only the epistemological spectator is aware of the fact that the everyday man and the scientific man in this free and easy intercourse are rashly assuming the right to glide over a cleft in the very structure of reality. This fact raises a query not favorable to the epistemologist. Why is it that the scientific man, who is constantly plying his venturous traffic of exchange of facts for ideas, of theories for laws, of real things for hypotheses, should be so wholly unaware of the radical and generic (as distinct from specific) difficulty

of the undertakings in which he is engaged? We thus come afresh to our inquiry: Does not the epistemological logician unwittingly transfer the specific difficulty which always faces the scientific man—the difficulty in detail of correct and adequate translation back and forth of *this* set of facts and *this* group of ideas—into a totally different problem of the wholesale relation of thought at large with reality in general? If such be the case, it is clear that the very way in which the epistemological type of logic states the problem of thinking, in relation both to empirical antecedents and to objective truth, makes that problem insoluble. Working terms, terms which as working are flexible and historic, relative, are transformed into absolute, fixed, and predetermined forms of being.

We come a little closer to the problem when we recognize that every scientific inquiry passes historically through at least four stages. (*a*) The first of these stages is, if I may be allowed the bull, that in which scientific inquiry does not take place at all, because no problem or difficulty in the quality of the experience has presented itself to provoke reflection. We have only to cast our eye back from the existing status of any science, or back from the status of any particular topic in any science, to discover a time when no reflective or critical thinking busied itself with the matter—when the facts and relations were taken for granted and thus were lost and absorbed in the value which accrued from the experience. (*b*) After the dawning of the problem, there comes a period of occupation with relatively crude and unorganized facts—the hunting for, locating, and collecting of raw material. This is the empiric stage, which no existing science, however proud in its attained rationality, can disavow as its own progenitor. (*c*) Then there is also a speculative stage: a period of guessing, of making hypotheses, of framing ideas which later on are labeled and con-

demned as only ideas. There is a period of distinction and classification-making which later on is regarded as only mentally-gymnastic in character. And no science, however proud in its present security of experimental assurance, can disavow a scholastic ancestor. (*d*) Finally, there comes a period of fruitful interaction between the mere ideas and the mere facts: a period when observation is determined by experimental conditions depending upon the use of certain guiding conceptions; when reflection is directed and checked at every point by the use of experimental data, and by the necessity of finding such form for itself as will enable it to serve as premise in a deduction leading to evolution of new meanings, and ultimately to experimental inquiry, which brings to light new facts. In the emerging of a more orderly and significant region of fact, and of a more coherent and self-luminous system of meaning, we have the natural limit of evolution of the logic of a given science.

But consider what has happened in this historic record. Unanalyzed experience has broken up into distinctions of facts and ideas; the factual side has been developed by indefinite and almost miscellaneous descriptions and cumulative listings; the conceptual side has been developed by unchecked and speculative elaboration of definitions, classifications, etc. There has been a relegation of accepted meanings to the limbo of mere ideas; there has been a passage of some of the accepted facts into the region of mere hypothesis and opinion. Conversely, there has been a continued issuing of ideas from the region of hypotheses and theories into that of facts, of accepted objective and meaningful contents. Out of a world of only *seeming* facts, and of only *doubtful* ideas, there emerges a universe continually growing in definiteness, order, and luminosity.

This progress, verified in every record of science, is an absolute monstrosity from the standpoint of the epistemol-

ogy which assumes a thought in general, on one side, and a reality in general, on the other. The reason that it does not present itself as such a monster and miracle to those actually concerned with it is because there is a certain *homogeneity* or *continuity* of reference and of use which controls all diversities in both the modes of existence specified and the grades of value assigned. The distinction of thought and fact is treated in the growth of a science, or of any particular scientific problem, as an *induced* and *intentional* practical division of labor; as relative assignments of position with reference to performance of a task; as deliberate distribution of forces at command for their more economic use. The interaction of bald fact and hypothetical idea into the outcome of a single world of scientific apprehension and comprehension is but the successful achieving of the aim on account of which the distinctions in question were instituted.

Thus we come back to the problem of logical theory. To take the distinctions of thought and fact, etc., as ontological, as inherently fixed in the make-up of the structure of being, is to treat the actual development of scientific inquiry and scientific control as a mere subsidiary topic ultimately of only utilitarian worth. It is also to state the terms upon which thought and being transact business in a way so totally alien to the use made of these distinctions in concrete experience as to create a problem which can be discussed only in terms of itself — not in terms of the conduct of life — metaphysics again in the bad sense of that term. As against this, the problem of a logic which aligns itself with the origin and employ of reflective thought in everyday life and in critical science, is to follow the natural history of thinking as a life-process having its own generating antecedents and stimuli, its own states and career, and its own specific objective or limit.

This point of view makes it possible for logical theory to come to terms with psychology.[1] When logic is considered as having to do with the wholesale activity of thought *per se*, the question of the historic process by which this or that particular thought came to be, of how its object happens to present itself as sensation, or perception, or conception, is quite irrelevant. These things are mere temporal accidents. The psychologist (not lifting his gaze from the realm of the changeable) may find in them matters of interest. His whole industry is just with natural history—to trace series of psychical events as they mutually excite and inhibit one another. But the logician, we are told, has a deeper problem and an outlook of more unbounded horizon. He deals with the question of the eternal nature of thought and its eternal validity in relation to an eternal reality. He is concerned, not with genesis, but with value, not with a historic cycle, but with absolute distinctions and relations.

Still the query haunts us: Is this so in truth? Or has the logician of a certain type arbitrarily made it thus by taking his terms apart from reference to the specific occasions in which they arise and situations in which they function? If the latter, then the very denial of historic relationship and of the significance of historic method, is indicative only of the unreal character of his own abstraction. It means in effect that the affairs under consideration have been isolated from the conditions in which alone they have determinable meaning and assignable worth. It is astonishing that, in the face of the advance of the evolutionary method in natural science, any logician can persist in the assertion of a rigid difference between the problem of origin and of nature; between genesis and analysis; between history and validity. Such assertion simply reiterates as final

[1] See ANGELL, "The Relations of Structural and Functional Psychology to Philosophy," *The Decennial Publications of the University of Chicago*, Vol. III (1903), Part II, pp. 61–6, 70–72.

a distinction which grew up and had meaning in pre-evolutionary science. It asserts against the most marked advance which scientific method has yet made a survival of a crude period of logical scientific procedure. We have no choice save either to conceive of thinking as a response to a specific stimulus, or else to regard it as something "in itself," having just in and of itself certain traits, elements, and laws. If we give up the last view, we must take the former.

The entire significance of the evolutionary method in biology and social history is that every distinct organ, structure, or formation, every grouping of cells or elements, has to be treated as an instrument of adjustment or adaptation to a particular environing situation. Its meaning, its character, its value, is known when, and only when, it is considered as an arrangement for meeting the conditions involved in some specific situation. This analysis of value is carried out in detail by tracing successive stages of development—by endeavoring to locate the particular situation in which each structure has its origin, and by tracing the successive modifications through which, in response to changing media, it has reached its present conformation.[1] To persist in condemning natural history from the standpoint of what natural history meant before it identified itself with an evolutionary process is not so much to exclude the natural-history standpoint from philosophic consideration as it is to evince ignorance of what it signifies.

Psychology as the natural history of the various attitudes and structures through which experiencing passes, as an account of the conditions under which this or that state emerges, and of the way in which it influences, by stimulation or inhibition, production of other states or conformations of consciousness, is indispensable to logical evaluation, the moment we treat logical theory as an account of think-

[1] See *Philosophical Review*, Vol. XI, pp. 117-20.

ing as a mode of adaptation to its own generating conditions, and judge its validity by reference to its efficiency in meeting its problems. The historical point of view describes the sequence; the normative follows the sequence to its conclusion, and then turns back and judges each historical step by viewing it in reference to its own outcome.[1]

In the course of changing experience we keep our balance as we move from situations of an affectional quality to those which are practical or appreciative or reflective, because we bear constantly in mind the context in which any particular distinction presents itself. As we submit each characteristic function and situation of experience to our gaze, we find it has a dual aspect. Wherever there is striving there are obstacles; wherever there is affection there are persons who are attached; wherever there is doing there is accomplishment; wherever there is appreciation there is value; wherever there is thinking there is material-in-question. We keep our footing as we move from one attitude to another, from one characteristic quality to another, because we know the position occupied in the whole growth by the particular function in which we are engaged, and the position within the function of the particular element that engages us.

The distinction *between* each attitude and function and its predecessor and successor is serial, dynamic, operative. The distinctions *within* any given operation or function are structural, contemporaneous, and distributive. Thinking follows, we will say, striving, and doing follows thinking. Each in the fulfilment of its own function inevitably calls out its successor. But coincident, simultaneous, and correspondent *within* doing, is the distinction of doer and of deed; *within* the function of thought, of thinking and material thought upon; within the function of striving, of obstacle

[1] See statements regarding the psychological and the logical in *The Child and the Curriculum*, pp. 28, 29.

of aim, of means and end. We keep our paths straight because we do not confuse the sequential, efficient, and functional relationship of types of experience with the contemporaneous, correlative, and structural distinctions of elements within a given function. In the seeming maze of endless confusion and unlimited shiftings, we find our way by the means of the stimulations and checks occurring within the process we are actually engaged with. We do not contrast or confuse a condition or state which is an element in the formation of one operation with the status or element which is one of the distributive terms of another function. If we do, we have at once an insoluble, because meaningless, problem upon our hands.

Now the epistemological logician deliberately shuts himself off from those cues and checks upon which the plain man instinctively relies, and which the scientific man deliberately searches for and adopts as constituting his technique. Consequently he is likely to set the sort of object or material which has place and significance only in one of the serial functional situations of experience, over against the active attitude which describes part of the structural constitution of another situation; or with equal lack of justification to assimilate terms characteristic of different stages to one another. He sets the agent, as he is found in the intimacy of love or appreciation, over against the externality of the fact, as that is defined within the reflective process. He takes the material which thought selects as its own basis for further procedure to be identical with the significant content which it secures for itself in the successful pursuit of its aim; and this in turn he regards as the material which was presented at the outset, and whose peculiarities were the express means of awakening thought. He identifies the final deposit of the thought-function with its own generating antecedent, and then disposes of the

resulting surd by reference to some metaphysical consideration, which remains when logical inquiry, when science (as interpreted by him), has done its work. He does this, not because he prefers confusion to order, or error to truth, but simply because, when the chain of historic sequence is cut, the vessel of thought is afloat to veer upon a sea without soundings or moorings. There are but two alternatives: either there is an object "in itself" of thought "in itself," or else there are a series of values which vary with the varying functions to which they belong. If the latter, the only way these values can be defined is by discriminating the functions to which they belong. It is only conditions relative to a specific period or epoch of development in a cycle of experience which enables one to tell what to do next, or to estimate the value and meaning of what is already done. And the epistemological logician, in choosing to take his question as one of thought which has its own form just as "thought," apart from the limits of the special work it has to do, has deprived himself of these supports and stays.

The problem of logic has a more general and a more specific phase. In its generic form, it deals with this question: How does one type of functional situation and attitude in experience pass out of and into another; for example, the technological or utilitarian into the æsthetic, the æsthetic into the religious, the religious into the scientific, and this into the socio-ethical and so on? The more specific question is: How does the particular functional situation termed the reflective behave? How shall we describe it? What in detail are its diverse contemporaneous distinctions, or divisions of labor, its correspondent *statuses;* in what specific ways do these operate with reference to each other so as to effect the specific aim which is proposed by the needs of the affair?

This chapter may be brought to conclusion by reference

to the more alternate value of the logic of experience, of logic taken in its wider sense; that is, as an account of the sequence of the various typical functions or situations of experience in their determining relations to one another. Philosophy, defined as such a logic, makes no pretense to be an account of a closed and finished universe. Its business is not to secure or guarantee any particular reality or value. *Per contra*, it gets the significance of a method. The right relationship and adjustment of the various typical phases of experience to one another is a problem felt in every department of life. Intellectual rectification and control of these adjustments cannot fail to reflect itself in an added clearness and security on the practical side. It may be that general logic can not become an instrument in the immediate direction of the activities of science or art or industry; but it is of value in criticising and in organizing the tools of immediate research in these lines. It also has direct significance in the valuation for social or life-purposes of results achieved in particular branches. Much of the immediate business of life is badly done because we do not know in relation to its congeners the organic genesis and outcome of the work that occupies us. The manner and degree of appropriation of the values achieved in various departments of social interest and vocation are partial and faulty because we are not clear as to the due rights and responsibilities of one function of experience in reference to others.

The value of research for social progress; the bearing of psychology upon educational procedure; the mutual relations of fine and industrial art; the question of the extent and nature of specialization in science in comparison with the claims of applied science; the adjustment of religious aspirations to scientific statements; the justification of a refined culture for a few in face of economic insufficiency for the mass—such are a few of the many social questions whose

final answer depends upon the possession and use of a general logic of experience as a method of inquiry and interpretation. I do not say that headway cannot be made in such questions apart from the method indicated: a logic of genetic experience. But unless we have a critical and assured view of the juncture in which and with reference to which a given attitude or interest arises, unless we know the service it is thereby called upon to perform and hence the organs or methods by which it best functions in that service, our progress is impeded and irregular. We take a part for a whole, a means for an end, or attack wholesale some other interest because it interferes with the deified sway of the one we have selected as ultimate. A clear and comprehensive consensus of social conviction, and a consequent concentrated and economical direction of effort, are assured only as there is some way of locating the position and rôle of each typical interest and occupation in experience. The domain of opinion is one of conflict; its rule is arbitrary and costly. Only intellectual method affords a substitute for opinion. The general logic of experience can alone do for the region of social values and aims what the natural sciences after centuries of struggle are doing for activity in the physical realm.

This does not mean that systems of philosophy which have attempted to state the nature either of thought and of reality at large, apart from limits of particular crises in the growth of experience, have been worthless — though it does mean that their industry has been somewhat misapplied. The unfolding of metaphysical theory has made large contributions to positive evaluations of the typical situations and relationships of experience — even when its conscious intention has been quite otherwise. Every system of philosophy is itself a mode of reflection; consequently (if our main contention be true), it too has been evoked out of

specific social antecedents, and has had its use as a response to them. It has effected something in modifying the situation within which it found its origin. It may not have solved the problem which it consciously put itself; in many cases we may freely admit that the question put has afterward been found to be so wrongly put as to be insoluble. Yet exactly the same thing is true, in precisely the same sense, in the history of science. For this reason, if for no other, it is impossible for the scientific man to cast the first stone at the philosopher.

The progress of science in any branch continually brings with it a realization that problems in their previous form of statement are insoluble because put in terms of unreal conditions; because the real conditions have been mixed up with mental artifacts or misconstructions. Every science is continually learning that its supposed solutions are only apparent, because the "solution" solves, not the actual problem, but one which has been made up. But the very putting of the question, the very giving of the wrong answer, induces modification of existing intellectual habits, standpoints, and aims. Wrestling with the problem, there is evolution of new forms of technique to control its treatment, there is search for new facts, institution of new types of experimentation; there is gain in the methodic control of experience. And all this is progress. It is only the worn-out cynic, the devitalized sensualist, and the fanatical dogmatist who interpret the continuous change of science as proving that, since each successive statement is wrong, the whole record is error and folly; and that the present truth is only the error not yet found out. Such draw the moral of caring naught for all these things, or of flying to some external authority which will deliver once for all the fixed and unchangeable truth. But historic philosophy even in its aberrant forms has proved a factor in the valuation of

experience; it has brought problems to light, it has provoked intellectual conflicts without which values are only nominal; even through its would-be absolutistic isolations, it has secured recognition of mutual dependencies and reciprocal reinforcements. Yet if it can define its work more clearly, it can concentrate its energy upon its own characteristic problem: the genesis and functioning in experience of various typical interests and occupations with reference to one another.

II

THOUGHT AND ITS SUBJECT-MATTER: THE ANTECEDENT CONDITIONS AND CUES OF THE THOUGHT-FUNCTION

We have discriminated logic in its wider sense, concerned with the sequence of characteristic functions and attitudes in experience, from logic in its stricter meaning, concerned in particular with description and interpretation of the function of reflective thought. We must avoid yielding to the temptation of identifying logic with either of these to the exclusion of the other; or of supposing that it is possible to isolate one finally from the other. The more detailed treatment of the organs and methods of reflection cannot be carried on with security save as we have a correct idea of the historic position of reflection in the evolving of experience. Yet it is impossible to determine this larger placing, save as we have a defined and analytic, as distinct from a merely vague and gross, view of what we mean by reflection—what is its actual constitution. It is necessary to work back and forth between the larger and the narrower fields, transforming every increment upon one side into a method of work upon the other, and thereby testing it. The apparent confusion of existing logical theory, its uncertainty as to its own bounds and limits, its tendency to oscillate from larger questions of the inherent worth of judgment and validity of inference over to details of scientific technique, and to translation of distinctions of formal logic into terms of an investigatory or verificatory process, are indications of the need of this double movement.

In the next three chapters it is proposed to take up some of the considerations that lie on the borderland between the

larger and the narrower conceptions of logical theory. I shall discuss the *locus* of the function of thought, so far as such *locus* enables us to select and characterize some of the most fundamental distinctions, or divisions of labor, within the reflective process. In taking up the problem of the subject-matter of thought, I shall try to make clear that it assumes three quite distinct forms according to the epochal moment reached in transformation of experience; and that continual confusion and inconsistency are introduced when these respective meanings are not identified and described according to their respective geneses and places. I shall attempt to show that we must consider subject-matter from the standpoint, first, of the *antecedents* or conditions that evoke thought; second, of the *datum* or *immediate material* presented to thought; and, third, of the *proper content* of thought. Of these three distinctions the first, that of antecedent and stimulus, clearly refers to the situation that is immediately prior to the thought-function as such. The second, that of datum or immediately given matter, refers to a distinction which is made within the thought-process as a part of and for the sake of its own *modus operandi*. It is a status in the scheme of thinking. The third, that of content or object, refers to the progress actually made in any thought-function; the material which is organized into the thought-situation, so far as this has fulfilled its purpose. It goes without saying that these are to be discriminated as stages of a life-process in the natural history of experience, not as ready-made or ontological; it is contended that, save as they are differentiated in connection with well-defined historical stages, they are either lumped off as equivalents, or else treated as absolute divisions—or as each by turns, according to the exigencies of the particular argument. In fact, this chapter will get at the matter of preliminary conditions of thought indirectly rather than directly, by indicating the

contradictory positions into which one of the most vigorous and acute of modern logicians, Lotze, has been forced through failing to define logical distinctions in terms of the history of readjustment of experience, and therefore endeavoring to interpret certain notions as absolute instead of as periodic and methodological.

Before passing directly to the exposition and criticism of Lotze, it will be well, however, to take the matter in a somewhat freer way. We cannot approach logical inquiry in a wholly direct and uncompromised manner. Of necessity we bring to it certain distinctions — distinctions partly the outcome of concrete experience; partly due to the logical theory which has got embodied in ordinary language and in current intellectual habits; partly results of deliberate scientific and philosophic inquiry. These more or less ready-made results are resources; they are the only weapons with which we can attack the new problem. Yet they are full of unexamined assumptions; they commit us to all sorts of logically predetermined conclusions. In one sense our study of the new subject-matter, let us say logical theory, is in truth only a review, a re-testing and criticising of the intellectual standpoints and methods which we bring with us to the study.

Everyone comes with certain distinctions already made between the subjective and the objective, between the physical and the psychical, between the intellectual and the factual. (1) We have learned to regard the region of emotional disturbance, of uncertainty and aspiration, as belonging somehow peculiarly to ourselves; we have learned to set over against this a world of observation and of valid thought as something unaffected by our moods, hopes, fears, and opinions. (2) We have also come to distinguish between what is immediately present in our experience and the past and the future; we contrast the realms of memory and anticipation

of sense-perception; the given with the ideal. (3) We are confirmed in a habit of distinguishing between what we call actual fact and our mental attitude toward that fact — the attitude of surmise or wonder or reflective investigation. While one of the aims of logical theory is precisely to make us critically conscious of the significance and bearing of these various distinctions, to change them from ready-made assumptions into controlled constructs, our mental habits are so set that they tend to have their own way with us; and we read into logical theory conceptions that were formed before we had even dreamed of the logical undertaking which after all has for its business to assign to the terms in question their proper meaning.

We find in Lotze an unusually explicit inventory of these various preliminary distinctions; and an unusually serious effort to deal with the problems which arise from introducing them into the structure of logical theory. (1) He expressly separates the matter of logical worth from that of psychological genesis. He consequently abstracts the subject-matter of logic as such wholly from the question of historic *locus* and *situs*. (2) He agrees with common-sense in holding that logical thought is reflective and thus presupposes a given material. He occupies himself with the nature of the antecedent conditions. (3) He wrestles with the problem of how a material formed prior to thought and irrespective of it can yet afford it stuff upon which to exercise itself. (4) He expressly raises the question of how thought working independently and from without upon a foreign material can shape the latter into results which are valid — that is, objective.

If his discussion is successful; if Lotze can provide the intermediaries which span the gulf between an independent thought-material and an independent thought-activity; if he can show that the question of the origin of thought-

material and of thought-activity is irrelevant to the question of its worth, we shall have to surrender the position already taken. But if we find that Lotze's elaborations only elaborate the same fundamental difficulty, presenting it now in this light and now in that, but never effecting more than presenting the problem as if it were its own solution, we shall be confirmed in our idea of the need of considering logical questions from a different point of view. If we find that, whatever his formal treatment, he always, as matter of fact, falls back upon some organized situation or function as the source of both the specific thought-material and the specific thought-activity in correspondence with each other, we shall have in so far an elucidation and even a corroboration of our theory.

1. We begin with the question of the material antecedents of thought — antecedents which condition reflection, and which call it out as reaction or response, by giving it its cue. Lotze differs from many logicians of the same type in affording us an explicit account of these antecedents. The ultimate material antecedents of thought are found in impressions, which are due to external objects as stimuli. Taken in themselves, these impressions are mere psychical states or events. They exist in us side by side, or one after the other, according as the objects which excite them operate simultaneously or successively. The occurrence of these various psychical states is not, however, entirely dependent upon the presence of the exciting thing. After a state has once been excited, it gets the power of reawakening other states which have accompanied it or followed it. The associative mechanism of revival plays a part. If we had a complete knowledge of both the stimulating object and its effects, and of the details of the associative mechanism, we should be able from given data to predict the whole course of any given train or current of ideas (for the impressions as conjoined

simultaneously or successively become ideas and a current of ideas).

Taken in itself, a sensation or impression is nothing but a "state of our consciousness, a mood of ourselves." Any given current of ideas is a necessary sequence of existences (just as necessary as any succession of material events), happening in some particular sensitive soul or organism. "Just because, under their respective conditions, every such series of ideas hangs together by the same necessity and law as every other, there would be no ground for making any such distinction of value as that between truth and untruth, thus placing one group in opposition to all the others." [1]

2. Thus far, as the last quotation clearly indicates, there is no question of reflective thought, and hence no question of logical theory. But further examination reveals a peculiar property of the current of ideas. Some ideas are merely coincident, while others may be termed coherent. That is to say, the exciting causes of some of our simultaneous and successive ideas really belong together; while in other cases they simply happen to act at the same time, without there being a real connection between them. By the associative mechanism, however, both the coherent and the merely coincident combinations recur. The first type of recurrence supplies positive material for knowledge; the second gives occasion for error.

3. It is a peculiar mixture of the coincident and the coherent which sets the peculiar problem of reflective thought. The business of thought is to recover and confirm the coherent, the really connected, adding to its reinstatement an accessory justifying notion of the real ground of coherence, while it eliminates the coincident as

[1] LOTZE, *Logic* (translation, Oxford, 1888), Vol. I, p. 2. For the preceding exposition see Vol. I, pp. 1, 2, 13, 14, 37, 38; also *Microkosmus*, Book V, chap. 4.

such. While the mere current of ideas is something which just happens within us, the process of elimination and of confirmation by means of statement of real ground and basis of connection is an activity which mind as such exercises. It is this distinction which marks off thought as activity from any psychical event and from the associative mechanism as receptive happenings. One is concerned with mere *de facto* coexistences and sequences; the other with the *worth* of these combinations.[1]

Consideration of the peculiar work of thought in going over, sorting out, and determining various ideas according to a standard of value will occupy us in our next chapter. Here we are concerned with the material antecedents of thought as they are described by Lotze. At first glance, he seems to propound a satisfactory theory. He avoids the extravagancies of transcendental logic, which assumes that all the matter of experience is determined from the very start by rational thought; and he also avoids the pitfall of purely empirical logic, which makes no distinction between the mere occurrence and association of ideas and the real worth and validity of the various conjunctions thus produced. He allows unreflective experience, defined in terms of sensations and their combinations, to provide material conditions for thinking, while he reserves for thought a distinctive work and dignity of its own. Sense-experience furnishes the antecedents; thought has to introduce and develop systematic connection—rationality.

A further analysis of Lotze's treatment may, however, lead us to believe that his statement is riddled through and through with inconsistencies and self-contradictions; that, indeed, any one part of it can be maintained only by the denial of some other portion.

1. The impression is the ultimate antecedent in its purest

[1] LOTZE, *Logic*, Vol. I, pp. 6, 7

or crudest form (according to the angle from which one views it). It is that which has never felt, for good or for bad, the influence of thought. Combined into ideas, these impressions stimulate or arouse the activities of thought, which are forthwith directed upon them. As the recipient of the activity which they have excited and brought to bear upon themselves, they furnish also the material content of thought —its actual stuff. As Lotze says over and over again: "It is the relations themselves already subsisting between impressions, when we become conscious of them, by which the action of thought which is never anything but reaction, is attracted; and this action consists merely in interpreting relations which we find existing between our passive impressions into aspects of the matter of impressions."[1] And again:[2] "Thought can make no difference where it finds none already in the matter of the impressions." And again:[3] "The possibility and the success of thought's procedure depends upon this original constitution and organization of the whole world of ideas, a constitution which, though not necessary in thought, is all the more necessary to make thinking possible."

The impressions and ideas play a versatile rôle; they now assume the part of ultimate antecedents and provocative conditions; of crude material; and somehow, when arranged, of content for thought. This very versatility awakens suspicion.

While the impression is merely subjective and a bare state of our own consciousness, yet it is determined, both as to its existence and as to its relation to other similar existences, by external objects as stimuli, if not as causes. It is also determined by a psychical mechanism so thoroughly objective or regular in its workings as to give the same necessary

[1] LOTZE, *Logic* (translation, Oxford, 1888), Vol. I, p. 25.

[2] *Ibid.*, Vol. I, p. 36. [3] *Ibid.*

character to the current of ideas that is possessed by any physical sequence. Thus that which is "nothing but a state of our consciousness" turns out straightway to be a specifically determined objective fact in a system of facts.

That this absolute transformation is a contradiction is no clearer than that just such a contradiction is indispensable to Lotze. If the impressions were nothing but states of consciousness, moods of ourselves, bare psychical existences, it is sure enough that we should never even know them to be such, to say nothing of conserving them as adequate conditions and material for thought. It is only by treating them as real facts in a real world, and only by carrying over into them, in some assumed and unexplained way, the capacity of representing the cosmic facts which arouse them, that impressions or ideas come in any sense within the scope of thought. But if the antecedents are really impressions-in-their-objective-setting, then Lotze's whole way of distinguishing thought-worth from *mere* existence or event without objective significance must be radically modified.

The implication that impressions have actually a matter or quality or meaning of their own becomes explicit when we refer to Lotze's theory that the immediate antecedent of thought is found in the *matter* of ideas. When thought is said to "take cognizance of *relations* which its own activity does not originate, but which have been prepared for it by the unconscious mechanism of the psychic states,"[1] the attribution of objective content, of reference and meaning to ideas, is unambiguous. The idea forms a most convenient half-way house for Lotze. On one hand, as absolutely prior to thought, as material antecedent condition, it is merely psychical, a bald subjective event. But as subject-matter for thought, as antecedent which affords stuff for thought's exercise, it is *meaning*, characteristic quality of content.

[1] *Microkosmus*, Book V, chap. 4.

Although we have been told that the impression is a mere receptive irritation without participation of mental activity, we are not surprised, in view of this capacity of ideas, to learn that the mind actually has a determining share in both the reception of stimuli and in their further associative combinations. The subject always enters into the presentation of any mental object, even the sensational, to say nothing of the perceptional and the imaged. The perception of a given state of things is possible only on the assumption that "the perceiving subject is at once enabled and compelled by its own nature to combine the excitations which reach it from objects into those forms which it is to perceive in the objects, and which it supposes itself simply to *receive* from them."[1]

It is only by continual transition from impression and ideas as mental states and events to ideas as cognitive (or logical) *objects or contents*, that Lotze bridges the gulf from bare exciting antecedent to concrete material conditions of thought. This contradiction, again, is necessary to Lotze's standpoint. To set out frankly with "meanings" as antecedents would demand reconsideration of the whole viewpoint, which supposes that the difference between the logical and its antecedent is a matter of the difference between *worth* and mere *existence* or *occurrence*. It would indicate that since meaning or value is already there, the task of thought must be that of the transformation or *reconstruction of worth* through an intermediary process of valuation. On the other hand, to stick by the standpoint of *mere* existence is not to get anything which can be called even antecedent of thought.

2. Why is there a task of transformation? Consideration of the material in its function of evoking thought, giving it its cue, will serve to complete the picture of the contradiction and of the real facts. It is the conflict between ideas as merely coincident and ideas as coherent that con-

[1] *Logic*, Vol. II, p. 235; see the whole discussion, §§ 325 through 327.

stitutes the need which provokes the response of thought. Here Lotze vibrates (*a*) between considering coincidence and coherence as both affairs of existence of psychical events; (*b*) considering coincidence as purely psychical and coherence as at least quasi-logical, and (*c*) the inherent logic which makes them both determinations within the sphere of reflective thought. In strict accordance with his own premises, coincidence and coherence both ought to be mere peculiarities of the current of ideas as events within ourselves. But so taken the distinction becomes absolutely meaningless. Events do not cohere; at the most certain sets of them happen more or less frequently than other sets; the only intelligible difference is one of repetition of coincidence. And even this attributes to an event the supernatural trait of reappearing after it has disappeared. Even coincidence has to be defined in terms of relation of the *objects* which are supposed to excite the psychical events that happen together.

As recent psychological discussion has made clear enough, it is the matter, meaning, or content, of ideas that is associated, not the ideas as states or existences. Take such an idea as sun-revolving-about-earth. We may say it means the conjunction of various sense-impressions, but it is conjunction, or mutual reference, of *attributes* that we have in mind in the assertion. It is absolutely certain that our psychical image of the sun is not psychically engaged in revolving about our psychical image of the earth. It would be amusing if such were the case; theaters and all dramatic representations would be at a discount. In truth, sun-revolving-about-earth is a single meaning or idea; it is a unified subject-matter within which certain distinctions of reference appear. It is concerned with what we intend when we think earth and sun, and think them in their relation to each other. It is really a specification or direction of how to think when we have occasion to think a certain subject-

matter. To treat the origin of this mutual reference as if it were simply a case of conjunction of ideas produced by conditions of original psycho-physical irritation and association is a profound case of the psychological fallacy. We may, indeed, analyze an experience and find that it had its origin in certain conditions of the sensitive organism, in certain peculiarities of perception and of association, and hence conclude that the belief involved in it was not justified by the facts themselves. But the significance of the belief in sun-revolving-about-earth as an item of the experience of those who meant it, consisted precisely in the fact that it was taken not as a mere association of feelings, but as a definite portion of the whole structure of objective experience, guaranteed by other parts of the fabric, and lending its support and giving its tone to them. It was to them part of the experience-frame of things—of the real universe.

Put the other way, if such an instance meant a mere conjunction of psychical states, there would be in it absolutely nothing to evoke thought. Each idea as event, as Lotze himself points out (Vol. I, p. 2), may be regarded as adequately and necessarily determined to the place it occupies. There is absolutely no question on the side of events of mere coincidence *versus* genuine connection. As event, it is there and it belongs there. We cannot treat something as at once bare fact of existence and as problematic subject-matter of logical inquiry. To take the reflective point of view is to consider the matter in a totally new light; as Lotze says, it is to raise the question of rightful claims to a position or relation.

The point becomes clearer when we contrast coincidence with connection. To consider coincidence as simply psychical, and coherence as at least quasi-logical, is to put the two on such different bases that no question of contrasting them can arise. The coincidence which precedes a valid or grounded coherence (the conjunction which as coexistence

of objects and sequence of acts is perfectly adequate) never is, as antecedent, the coincidence which is set over against coherence. The side-by-sideness of books on my bookshelf, the succession of noises that rise through my window, do not as such trouble me logically. They do not appear as errors or even as problems. One coexistence is just as good as any other until some new point of view, or new end, presents itself. If it is a question of the convenience of arrangement of books, then the value of their present collocation becomes a problem. Then I may contrast their present bare conjunction with a scheme of possible coherence. If I regard the sequence of noises as a case of articulate speech, their order becomes important—it is a problem to be determined. The inquiry whether a given combination means only apparent or real connection, shows that reflective inquiry is already going on. Does this phase of the moon really mean rain, or does it just happen that the rain-storm comes when the moon has reached this phase? To ask such questions shows that a certain portion of the universe of experience is subjected to critical analysis for purposes of definitive restatement. The tendency to regard one combination as bare conjunction or mere coincidence is absolutely a *part* of the movement of mind in its search for the real connection.

If coexistence as such is to be set over against coherence as such, as the non-logical against the logical, then, since our whole spatial universe is one of collocation, and since thought in this universe can never get farther than substituting one collocation for another, the whole realm of space-experience is condemned off-hand and in perpetuity to anti-rationality. But, in truth, coincidence as over against coherence, conjunction as over against connection, is just *suspected* coherence, one which is under the fire of active inquiry. The distinction is one which arises only within the grasp of the logical or reflective function.

3. This brings us explicitly to the fact that there is no such thing as either coincidence or coherence in terms of the elements or meanings contained in any couple or pair of ideas taken by itself. It is only when they are co-factors in a situation or function which includes more than either the "coincident" or the "coherent" and more than the arithmetical sum of the two, that thought's activity can be evoked. Lotze is continually in this dilemma: Thought either shapes its own material or else just accepts it. In the first case (since Lotze cannot rid himself of the presumption that thought must have a fixed ready-made antecedent) its activity can only alter this stuff and thus lead the mind farther away from reality. But if thought just accepts its material, how can there be any distinctive aim or activity of thought at all? As we have seen, Lotze endeavors to escape this dilemma by supposing that, while thought receives its material, it yet checks it up: it eliminates certain portions of it and reinstates others, plus the stamp and seal of its own validity.

Lotze objects most strenuously to the notion that thought awaits its subject-matter with certain ready-made modes of apprehension. This notion would raise the insoluble question of how thought contrives to bring the matter of each impression under that particular form which is appropriate to it (Vol. I, p. 24). But he has not really avoided the difficulty. How does thought know which of the combinations are merely coincident and which are merely coherent? How does it know which to eliminate as irrelevant and which to confirm as grounded? Either this evaluation is an imposition of its own, or else gets its cue and clue from the subject-matter. Now, if the coincident and the coherent taken in and of themselves are competent to give this direction, they are already practically labeled. The further work of thought is one of supererogation. It has at most barely

to note and seal the material combinations that are already there. Such a view clearly renders thought's work as unnecessary in form as it is futile in force.

But there is no alternative in this dilemma except to recognize that an entire situation of experience, within which are both that afterward found to be mere coincidence and that found to be real connection, actually provokes thought. It is only as an experience previously accepted comes up in its wholeness against another one equally integral; and only as some larger experience dawns which requires each as a part of itself and yet within which the required factors show themselves mutually incompatible, that thought arises. It is not bare coincidence, or bare connection, or bare addition of one to the other, that excites thought. It is a situation which is organized or constituted as a whole, and which yet is falling to pieces in its parts — a situation which is in conflict within itself — that arouses the search to find what really goes together and a correspondent effort to shut out what only seemingly belongs together. And real coherence means precisely capacity to exist within the comprehending whole. It is a case of the psychologist's fallacy to read back into the preliminary situation those distinctions of mere conjunction of material and of valid relationship which get existence, to say nothing of fixation, only within the thought-process.

We must not leave this phase of the discussion, however, until it is quite clear that our objection is not to Lotze's position that reflective thought arises from an antecedent which is not reflectional in character; nor yet to his idea that this antecedent has a certain structure and content of its own setting the peculiar problem which evokes thought and gives the cue to its specific activities. On the contrary, it is this latter point upon which we would insist; and, by insisting, point out, negatively, that this view is absolutely inconsistent with Lotze's theory that psychical impressions and ideas

are the true antecedents of thought; and, positively, that it is the *situation as a whole*, and not any one isolated part of it, or distinction within it, that calls forth and directs thinking. We must beware the fallacy of assuming that some one element in the prior situation in isolation or detachment induces the thought which in reality comes forth only from the whole disturbed situation. On the negative side, characterizations of impression and idea (whether as mental contents or as psychical existences) are distinctions which arise only within reflection upon the situation which is the genuine antecedent of thought; while the distinction of psychical existences from external existences arises only within a highly elaborate technical reflection—that of the psychologist as such.[1] Positively, it is the whole dynamic experience with its qualitative and pervasive identity of value, and its inner distraction, its elements at odds with each other, in tension against each other, contending each for its proper placing and relationship, that generates the thought-situation.

From this point of view, at this period of development, the distinctions of objective and subjective have a characteristic meaning. The antecedent, to repeat, is a situation in which the various factors are actively incompatible with each other, and which yet in and through the striving tend to a re-formation of the whole and to a restatement of the parts. This situation as such is clearly objective. It is there; it is there as a whole; the various parts are there; and their

[1] The emphasis here is upon the term "existences," and in its plural form. Doubtless the distinction of some experiences as belonging to me, as mine in a peculiarly intimate way, from others as chiefly concerning other persons, or as having to do with things, is an early one. But this is a distinction of *concern*, of value. The distinction referred to above is that of making an *object*, or presentation, out of this felt type of value, and thereby breaking it up into distinct "events," etc., with their own laws of inner connection. This is the work of psychological analysis. Upon the whole matter of the psychical I am glad to refer to PROFESSOR GEORGE H. MEAD'S article entitled "The Definition of the Psychical," Vol. III, Part II, of *The Decennial Publications of the University of Chicago.*

active incompatibility with one another is there. Nothing is conveyed at this point by asserting that any particular part of the situation is illusory or subjective, or mere appearance; or that any other is truly real. It is the further work of *thought* to exclude some of the contending factors from membership in experience, and thus to relegate them to the sphere of the merely subjective. But just at this epoch the experience exists as one of vital and active confusion and conflict. The conflict is not only objective in a *de facto* sense (that is, really existent), but is objective in a logical sense as well; it is just this conflict which effects the transition into the thought-situation—this, in turn, being only a constant movement toward a defined equilibrium. The conflict has objective logical value because it is the antecedent condition and cue of thought.

Every reflective attitude and function, whether of naïve life, deliberate invention, or controlled scientific research, has risen through the medium of some such total objective situation. The abstract logician may tell us that sensations or impressions, or associated ideas, or bare physical things, or conventional symbols, are antecedent conditions. But such statements cannot be verified by reference to a single instance of thought in connection with actual practice or actual scientific research. Of course, by extreme mediation symbols may become conditions of evoking thought. They get to be objects in an active experience. But they are stimuli only in case their manipulation to form a new whole occasions resistance, and thus reciprocal tension. Symbols and their definitions develop to a point where dealing with them becomes itself an experience, having its own identity; just as the handling of commercial commodities, or arrangement of parts of an invention, is an individual experience. There is always as antecedent to thought an experience of some subject-matter of the physical or social world, or organized

intellectual world, whose parts are actively at war with each other—so much so that they threaten to disrupt the entire experience, which accordingly for its own maintenance requires deliberate re-definition and re-relation of its tensional parts. This is the reconstructive process termed thinking: the reconstructive situation, with its parts in tension and in such movement toward each other as tends to a unified experience, is the thought-situation.

This at once suggests the subjective phase. The situation, the experience as such, is objective. There is an experience of the confused and conflicting tendencies. But just *what in particular* is objective, just *what* form the situation shall take as an organized harmonious whole, is unknown; that is the problem. It is the uncertainty as to the *what* of the experience together with the certainty *that* there is such an experience, that evokes the thought-function. Viewed from this standpoint of uncertainty, the situation as a whole is subjective. No particular content or reference can be asserted off-hand. Definite assertion is expressly reserved—it is to be the outcome of the procedure of reflective inquiry now undertaken. This holding off of contents from definitely asserted position, this viewing them as candidates for reform, is what we mean at this stage of the natural history of thought by the subjective.

We have followed Lotze through his tortuous course of inconsistencies. It is better, perhaps, to run the risk of vain repetition, than that of leaving the impression that these are *mere* self-contradictions. It is an idle task to expose contradictions save we realize them in relation to the fundamental assumption which breeds them. Lotze is bound to differentiate thought from its antecedents. He is intent to do this, however, through a preconception that marks off the thought-situation radically from its predecessor, through a difference that is complete, fixed, and absolute,

or at large. It is a total contrast of thought as such to something else as such that he requires, not a contrast within experience of one phase of a process, one period of a rhythm, from others.

This complete and rigid difference Lotze finds in the difference between an experience which is *mere existence* or occurrence, and one which has to do with worth, truth, right relationship. Now things, objects, have already, implicitly at least, determinations of worth, of truth, reality, etc. The same is true of deeds, affections, etc., etc. Only states of feelings, bare impressions, etc., seem to fulfil the prerequisite of being given as existence, and yet without qualification as to worth, etc. Then the current of ideas offers itself, a ready-made stream of events, of existences, which can be characterized as wholly innocent of reflective determination, and as the natural predecessor of thought.

But this stream of existences is no sooner there than its total incapacity to officiate as material condition and cue of thought appears. It is about as relevant as are changes that may be happening on the other side of the moon. So, one by one, the whole series of determinations of value or worth already traced are introduced *into* the very make-up, the inner structure, of what was to be *mere* existence: viz., (1) value as determined by things of whose spatial and temporal relations the things are somehow *representative;* (2) hence, value in the shape of *meaning*—the idea as significant, possessed of quality, and not a mere event; (3) distinguished values of coincidence and coherence within the stream. All these kinds of value are explicitly asserted, as we have seen; underlying and running through them all is the recognition of the supreme value of a situation which is organized as a whole, yet conflicting in its inner constitution.

These contradictions all arise in the attempt to put thought's work, as concerned with value or validity over

against experience as a mere antecedent happening, or occurrence. Since this contrast arises because of the deeper attempt to consider thought as an independent somewhat in general which yet, in *our* experience, is specifically dependent, the sole radical avoiding of the contradictions can be found in the endeavor to characterize thought as a specific mode of valuation in the evolution of significant experience, having its own specific occasion or demand, and its own specific place.

The nature of the organization and value that the antecedent conditions of the thought-function possess is too large a question here to enter upon in detail. Lotze himself suggests the answer. He speaks of the current of ideas, just as a current, supplying us with the "mass of well-grounded information which *regulates* daily life" (Vol. I, p. 4). It gives rise to "*useful combinations*," "*correct expectations*," "*seasonable reactions*" (Vol. I, p. 7). He speaks of it, indeed, as if it were just the ordinary world of naïve experience, the so-called empirical world, as distinct from the world as critically revised and rationalized in scientific and philosophic inquiry. The contradiction between this interpretation and that of a mere stream of psychical impressions is only another instance of the difficulty already discussed. But the phraseology suggests the type of value possessed by it. The unreflective world is a world of practical values; of ends and means, of their effective adaptations; of control and regulation of conduct in view of results. Even the most purely utilitarian of values are nevertheless values; not *mere* existences. But the world of uncritical experience is saved from reduction to just material uses and worths; for it is a world of social aims and means, involving at every turn the values of affection and attachment, of competition and co-operation. It has incorporate also in its own being the surprise of æsthetic values — the sudden joy of light, the gracious wonder of tone and form.

I do not mean that this holds in gross of the unreflective world of experience over against the critical thought-situation—such a contrast implies the very wholesale, at large, consideration of thought which I am striving to avoid. Doubtless many and many an act of thought has intervened in effecting the organization of our commonest practical-affectional-æsthetic region of values. I only mean to indicate that thought does take place *in* such a world; not *after* a world of bare existences lacking value-specifications; and that the more systematic reflection we call organized science, may, in some fair sense, be said to come *after*, but to come after affectional, artistic, and technological interests which have found realization and expression in building up a world of values.

Having entered so far upon a suggestion which cannot be followed out, I venture one other digression. The notion that value or significance as distinct from mere existentiality is the product of thought or reason, and that the source of Lotze's contradictions lies in the effort to find *any* situation prior or antecedent to thought, is a familiar one—it is even possible that my criticisms of Lotze have been interpreted by some readers in this sense.[1] This is the position frequently called neo-Hegelian (though, I think, with questionable accuracy), and has been developed by many writers in criticising Kant. This position and that taken in this chapter do indeed agree in certain general regards. They are at one in denial of the factuality and the possi-

[1] We have a most acute and valuable criticism of Lotze from this point of view in PROFESSOR HENRY JONES, *Philosophy of Lotze*, 1895. My specific criticisms agree in the main with his, and I am glad to acknowledge my indebtedness. But I cannot agree in the belief that the business of thought is to qualify reality as such; its occupation appears to me to be determining the reconstruction of some aspect or portion of reality, and to fall within the course of reality itself; being, indeed, the characteristic medium of its activity. And I cannot agree that reality as such, with increasing fulness of knowledge, presents itself as a thought-system, though, as just indicated, I have no doubt that reality appears as thought-specifications or values, just as it does as affectional and æsthetic and the rest of them.

bility of developing fruitful reflection out of antecedent bare existence or mere events. They unite in denying that there is or can be any such thing as mere existence — phenomenon unqualified as respects meaning, whether such phenomenon be psychic or cosmic. They agree that reflective thought grows organically out of an experience which is already organized, and that it functions within such an organism. But they part company when a fundamental question is raised: Is all organized meaning the work of thought? Does it therefore follow that the organization out of which reflective thought grows is the work of thought of some other type — of Pure Thought, Creative or Constitutive Thought, Intuitive Reason, etc.? I shall indicate briefly the reasons for divergence at this point.

To cover all the practical-social-æsthetic values involved, the term "thought" has to be so stretched that the situation might as well be called by any other name that describes a typical value of experience. More specifically, when the difference is minimized between the organized and arranged scheme of values out of which reflective inquiry proceeds, and reflective inquiry itself (and there can be no other reason for insisting that the antecedent of reflective thought is itself somehow thought), exactly the same type of problem recurs that presents itself when the distinction is exaggerated into one between bare unvalued existences and rational coherent meanings.

For the more one insists that the antecedent situation is constituted by thought, the more one has to wonder why another type of thought is required; what need arouses it, and how it is possible for it to improve upon the work of previous constitutive thought. This difficulty at once forces us from a logic of experience as it is concretely experienced into a metaphysic of a purely hypothetical experience. Constitutive thought precedes *our* conscious thought-operations;

hence it must be the working of some absolute universal thought which, unconsciously to our reflection, builds up an organized world. But this recourse only deepens the difficulty. How does it happen that the absolute constitutive and intuitive Thought does such a poor and bungling job that it requires a finite discursive activity to patch up its products? Here more metaphysic is called for: The Absolute Reason is now supposed to work under limiting conditions of finitude, of a sensitive and temporal organism. The antecedents of reflective thought are not, therefore, determinations of thought pure and undefiled, but of what thought can do when it stoops to assume the yoke of change and of feeling. I pass by the metaphysical problem left unsolved by this flight into metaphysic: Why and how should a perfect, absolute, complete, finished thought find it necessary to submit to alien, disturbing, and corrupting conditions in order, in the end, to recover through reflective thought in a partial, piecemeal, wholly inadequate way what it possessed at the outset in a much more satisfactory way?

I confine myself to the .logical difficulty. How can thought relate itself to the fragmentary sensations, impressions, feelings, which, in their contrast with and disparity from the workings of constitutive thought, mark it off from the latter; and which in their connection with its products give the cue to reflective thinking? *Here we have again exactly the problem with which Lotze has been wrestling:* we have the same insoluble question of the reference of thought-activity to a wholly indeterminate unrationalized, independent, prior existence. The absolute rationalist who takes up the problem at this point will find himself forced into the same continuous seesaw, the same scheme of alternate rude robbery and gratuitous gift, that Lotze engaged in. The simple fact is that here *is* just where Lotze himself began; he saw that previous transcendental logicians had

left untouched the specific question of relation of *our* supposedly finite, reflective thought to its own antecedents, and he set out to make good the defect. If reflective thought is required because constitutive thought works under externally limiting conditions of sense, then we have some elements which are, after all, mere existences, events, etc. Or, if they have organization from some other source, and induce reflective thought not as bare impressions, etc., but through their place in some whole, then we have admitted the possibility of organic unity in experience, apart from Reason, and the ground for assuming Pure Constitutive Thought is abandoned.

The contradiction appears equally when viewed from the side of thought-activity and its characteristic forms. All our knowledge, after all, of thought as constitutive is gained by consideration of the operations of reflective thought. The perfect system of thought is so perfect that it is a luminous, harmonious whole, without definite parts or distinctions — or, if there are such, it is only reflection that brings them out. The categories and methods of constitutive thought itself must therefore be characterized in terms of the *modus operandi* of reflective thought. Yet the latter takes place just because of the peculiar problem of the peculiar conditions under which it arises. Its work is progressive, reformatory, reconstructive, synthetic, in the terminology made familiar by Kant. We are not only *not* justified, accordingly, in transferring its determinations over to constitutive thought, but we are absolutely prohibited from attempting any such transfer. To identify logical processes, states, devices, results that are conditioned upon the primary fact of resistance to thought as constitutive with the structure of such thought is as complete an instance of the fallacy of recourse from one genus to another as could well be found. Constitutive and reflective thought are, first, defined in terms of their dissimi-

larity and even opposition, and then without more ado the forms of the description of the latter are carried over bodily to the former![1]

This is not meant for a merely controversial criticism. It is meant to point positively toward the fundamental thesis of these chapters: All the distinctions of the thought-function, of conception as over against sense-perception, of judgment in its various modes and forms, of inference in its vast diversity of operation — all these distinctions come within the thought-situation as growing out of a characteristic antecedent typical formation of experience; and have for their purpose the solution of the peculiar problem with respect to which the thought-function is generated or evolved: the restoration of a deliberately integrated experience from the inherent conflict into which it has fallen.

The failure of transcendental logic has the same origin as the failure of the empiristic (whether taken pure or in the mixed form in which Lotze presents it). It makes absolute and fixed certain distinctions of existence and meaning, and of one kind of meaning and another kind, which are wholly historic and relative in their origin and their significance. It views thought as attempting to represent or state reality once for all, instead of trying to determine some phases or contents of it with reference to their more effective and significant reciprocal employ — instead of as reconstructive. The rock against which every such logic splits is that either reality already has the statement which thought is endeavoring to give it, or else it has not. In the former case, thought is futilely reiterative; in the latter, it is falsificatory.

The significance of Lotze for critical purposes is that his peculiar effort to combine a transcendental view of thought (*i. e.*, of Thought as active in forms of its own, pure in and

[1] Bradley's criticisms of rationalistic idealism should have made the force of this point reasonably familiar.

of themselves) with certain obvious facts of the dependence of our thought upon specific empirical antecedents, brings to light fundamental defects in both the empiristic and the transcendental logics. We discover a common failure in both: the failure to view logical terms and distinctions with respect to their necessary function in the redintegration of experience.

III

THOUGHT AND ITS SUBJECT-MATTER: THE DATUM OF THINKING

We have now reached a second epochal stage in the evolution of the thought-situation, a crisis which forces upon us the problem of the distinction and mutual reference of the datum or presentation, and the ideas or "thoughts." It will economize and perhaps clarify discussion if we start from the relatively positive and constructive result just reached, and review Lotze's treatment from that point of regard.

We have reached the point of conflict in the matters or contents of an experience. It is *in* this conflict and because of it that the matters or contents, or significant quales, stand out as such. As long as the sun revolves about earth without tension or question, this "content," or fact, is not in any way abstracted *as* content or object. Its very distinction as content from the form or mode of experience as such is the result of post-reflection. The same conflict makes other experiences assume conscious objectification; they, too, cease to be ways of living, and become distinct objects of observation and consideration. The movements of planets, eclipses, etc., are cases in point.[1] The maintenance of a unified experience has become a problem, an end. It is no longer secure. But this involves such restatement of the conflicting elements as will enable them to take a place somewhere in the new experience; they must be disposed of somehow, and they can be disposed of finally only as they are provided for. That

[1] The common statement that primitive man projects his own volitions, emotions, etc., into objects is but a back-handed way of expressing the truth that "objects," etc., have only gradually emerged from their life-matrix. Looking back, it is almost impossible to avoid the fallacy of supposing that somehow such objects were there first and were afterward emotionally appreciated.

is, they cannot be simply denied or excluded or eliminated; they must be taken into the fold of the new experience; such introduction, on the other hand, clearly demands more or less modification or transformation on their part. The thought-situation is the conscious maintenance of the unity of experience, with a critical consideration of the claims of the various conflicting contents to a place within itself, and a deliberate final assignment of position.

The conflicting situation inevitably polarizes or dichotomizes itself. There is somewhat which is untouched in the contention of incompatibles. There is something which remains secure, unquestioned. On the other hand, there are elements which are rendered doubtful and precarious. This gives the framework of the general distribution of the field into "facts," the given, the presented, the Datum; and ideas, the ideal, the conceived, the Thought. For there is always something unquestioned in any problematic situation at any stage of its process,[1] even if it be only the fact of conflict or tension. For this is never *mere* tension at large. It is thoroughly qualified, or characteristically toned and colored, by the particular elements which are in strife. Hence it is *this* conflict, unique and irreplaceable. That it comes now means precisely that it has never come before; that it is now passed in review and some sort of a settlement reached, means that just *this* conflict will never recur. In a word, the conflict as such is immediately expressed, or felt, as of just this and no other sort, and this immediately apprehended quality is an irreducible datum. *It* is fact, even if all else be *doubtful.* As it is subjected to examination, it loses vagueness and assumes more definite form.

[1] Of course, this very element may be the precarious, the ideal, and possibly fanciful of some other situation. But it is to change the historic into the absolute to conclude that therefore everything is uncertain, all at once, or as such. This gives metaphysical skepticism as distinct from the working skepticism which is an inherent factor in all reflection and scientific inquiry.

Only in very extreme cases, however, does the assured, unquestioned element reduce to as low terms as we have here imagined. Certain things come to stand forth as facts, no matter what else may be doubted. There are certain *apparent* diurnal changes of the sun; there is a certain annual course or track. There are certain nocturnal changes in the planets, and certain seasonal rhythmic paths. The significance of these may be doubted: Do they *mean* real change in the sun or in the earth? But change, and change of a certain definite and numerically determinate character is there. It is clear that such out-standing facts (ex-istences) constitute the data, the given or presented, of the thought-function.

It is obvious that this is only one correspondent, or status, in the total situation. With the consciousness of *this* as certain, as given to be reckoned with, goes the consciousness of uncertainty as to *what it means*—of how it is to be understood or interpreted. The facts *qua* presentation or existences are sure; *qua* meaning (position and relationship in an experience yet to be secured) they are doubtful. Yet doubt does not preclude memory or anticipation. Indeed, it is possible only through them. The memory of past experience makes sun-revolving-about-earth an object of attentive regard. The recollection of certain other experiences suggests the idea of earth-rotating-daily-on-axis and revolving-annually-about-sun. These contents are as much present as is the observation of change, but as respects worth, they are only possibilities. Accordingly, they are categorized or disposed of as just ideas, meanings, thoughts, ways of conceiving, comprehending, interpreting facts.

Correspondence of reference here is as obvious as correlation of existence. In the logical process, the datum is not just real existence, and the idea mere psychical unreality. Both are modes of existence—one of *given* existence, the

other of *mental* existence. And if the mental existence is in such cases regarded, from the standpoint of the unified experience aimed at, as having only *possible* value, the datum also is regarded, from the value standpoint, as incomplete and unassured. The very existence of the idea or meaning as separate *is* the partial, broken up, and hence objectively unreal (from the validity standpoint) character of the datum. Or, as we commonly put it, while the ideas are impressions, suggestions, guesses, theories, estimates, etc., the facts are crude, raw, unorganized, brute. They lack relationship, that is, assured place in the universe; they are deficient as to continuity. Mere change of apparent position of sun, which is absolutely unquestioned as datum, is a sheer abstraction from the standpoint either of the organized experience left behind, or of the reorganized experience which is the end—the objective. It is impossible as a persistent object in experience or reality. In other words, datum and ideatum are divisions of labor, co-operative instrumentalities, for economical dealing with the problem of the maintenance of the integrity of experience.

Once more, and briefly, both datum and ideatum may (and positively, veritably, do) break up, each for itself, into physical and psychical. In so far as the conviction gains ground that the earth revolves about the sun, the old fact is broken up into a new cosmic existence, and a new psychological condition—the recognition of a mental process in virtue of which movements of smaller bodies in relation to very remote larger bodies are interpreted in a reverse sense. We do not just eliminate as false the source of error in the old content. We reinterpret it as valid in its own place, viz., a case of the psychology of apperception, although invalid as a matter of cosmic structure. In other words, with increasing accuracy of determination of the given, there comes a distinction, for methodological purposes, between the *quality*

or matter of the sense-experience and its *form*—the sense-perceiving, as itself a psychological fact, having its own place and laws or relations. Moreover, the old experience, that of sun-revolving, abides. But it is regarded as belonging to "me"—to this experiencing individual, rather than to the cosmic world. It is *psychic*.

Here, then, *within* the growth of the thought-situation and as a part of the process of determining *specific* truth under *specific* conditions, we get for the first time the clue to that distinction with which, as ready-made and prior to all thinking, Lotze started out, namely, the separation of the matter of impression from impression as psychical event. The separation which, taken at large, engenders an insoluble problem, appears within a particular reflective inquiry, as an inevitable differentiation of a scheme of values.

The same sort of thing occurs on the side of thought, or meaning. The meaning or idea which is growing in acceptance, which is gaining ground as meaning-of-datum, gets logical or intellectual or objective force; that which is losing standing, which is increasingly doubtful, gets qualified as just a notion, a fancy, a pre-judice, mis-conception—or finally just an error, a mental slip.

Evaluated as fanciful in validity it becomes mere image—subjective;[1] and finally a psychical existence. It is not eliminated, but receives a new reference or meaning. Thus the distinction between subjectivity and objectivity is not one between meaning as such and datum as such. It is a specification that emerges, correspondently, in *both* datum and ideatum, as affairs of the direction of logical movement. That which is left behind in the evolution of accepted meaning is characterized as real, but only in a psychical sense;

[1] But this is a slow progress within reflection. Plato, who was influential in bringing this general distinction to consciousness, still thought and wrote as if "image" were itself a queer sort of objective existence; it was only gradually that it was disposed of as psychical, or a phase of immediate experience.

that which is moved toward is regarded as real in an objective, cosmic sense.[1]

The implication of the psychic and the logical within both the given presentation and the thought about it, appears in the continual shift to which logicians of Lotze's type are put. When the psychical is regarded as existence over against meaning as just ideal, reality seems to reside in the psychical; it is *there* anyhow, and meaning is just a curious attachment—curious because as *mere meaning* it is non-existent as event or state—and there seems to be nothing by which it can be even tied to the psychical state as its bearer or representative. But when the emphasis falls on thought as *content*, as significance, then the psychic event, the idea as image[2] (as distinct from idea as meaning) appears as an accidental but necessary evil, the unfortunate irrelevant medium through which *our* thinking has to go on.[3]

[1] Of course, this means that what is excluded and so left behind in the problem of determination of *this* objective content is regarded as psychical. With reference to other problems and aims this same psychic existence is initial, not survival. Released from its prior absorption in some unanalyzed experience it gains standing and momentum on its own account; *e. g.*, the "personal equation" represents what is eliminated from a given astronomic time-determination as being purely subjective, or "source-of-error." But it is initiatory in reference to new modes of technique, re-readings of previous data—new considerations in psychology, even new socio-ethical judgments. Moreover, it remains a fact, and even a worthful fact, as a part of one's own "inner" experience, as an immediate *psychical reality*. That is to say, there is a region of *personal* experience (mainly emotive or affectional) already recognized as a sphere of value. The "source of error" is disposed of by making it a *fact* of this region. The recognition of falsity does not *originate* the psychic (p. 38, note).

[2] Of course, this is a further reflective distinction. The plain man and the student do not determine the extraneous, irrelevant, and misleading matter as image in a *psychological* sense, but only as *fanciful* or fantastic. Only to the psychologist and for *his* purpose does it break up into image and meaning.

[3] Bradley, more than any other writer, has seized upon this double antithesis, and used it first to condemn the logical as such, and then turned it around as the impartial condemnation of the psychical also. See *Appearance and Reality*. In chap. 15 he metes out condemnation to "thought" because it can never take in the psychical existence or reality which is present; in chap. 19, he passes similar judgment upon the "psychical" because it is brutally fragmentary. Other epistemological logicians have wrestled—or writhed—with this problem, but I believe Bradley's position is impregnable—from the standpoint of ready-made differences. When the antithesis is treated as part and lot of the process of defining the truth of a particular subject-matter, and thus as historic and relative, the case is quite otherwise.

1. *The data of thought.*—When we turn to Lotze, we find that he makes a clear distinction between the presented material of thought, its datum, and the typical characteristic modes of thinking in virtue of which the datum gets organization or system. It is interesting to note also that he states the datum in terms different from those in which the antecedents of thought are defined. From the point of view of the material upon which ideas exercise themselves, it is not coincidence, collocation, or succession that counts; but gradation of degrees in a scale. It is not things in spatial or temporal grouping that are emphasized, but qualities as mutually distingushed, yet classed—as differences of a common somewhat. There is no inherent inconceivability in the idea that every impression should be as incomparably different from every other as sweet is from warm. But by a remarkable circumstance such is not the case. We have series, and networks of series. We have diversity of a common—diverse colors, sounds, smells, tastes, etc. In other words, the datum is sense-qualities which, fortunately for thought, are given arranged, as shades, degrees, variations, or qualities of somewhat that is identical.[1]

All this is given, presented, to our ideational activities. Even the universal, the common-color which runs through the various qualities of blue, green, white, etc., is not a product of thought, but something which thought finds already in existence. It conditions comparison and reciprocal distinction. Particularly all mathematical determinations,whether of counting (number), degree (more or less), and quantity (greatness and smallness), come back to this peculiarity of the datum of thought. Here Lotze dwells at considerable length upon the fact that the very possibility, as well as the success, of thought is due to this peculiar universalization or *prima facie* ordering with which its material

[1] Vol. I, pp. 28–34.

is given to it. Such pre-established fitness in the meeting of two things that have nothing to do with each other is certainly cause enough for wonder and congratulation.

It should not be difficult to see why Lotze uses different categories in describing the given material of thought from those employed in describing its antecedent conditions, even though, according to him, the two are absolutely the same.[1] He has different *functions* in mind. In one case, the material must be characterized as evoking, as incentive, as stimulus — from this point of view the peculiar combination of coincidence and coherence is emphasized. But in the other case the material must be characterized as affording stuff, actual subject-matter. Data are not only what is given *to* thought, but they are also the food, the raw material, *of* thought. They must be described as, on the one hand, wholly outside of thought. This clearly puts them into the region of sense-perception. They are matter of *sensation* given free from all inferring, judging, relating influence. Sensation is just what is *not* called up in memory or in anticipated projection — it is the immediate, the irreducible. On the other hand, sensory-*matter* is quali-

[1] It is interesting to see how explicitly Lotze is compelled finally to differentiate two aspects in the antecedents of thoughts, one of which is necessary in order that there may be anything to call out thought (a lack, or problem); the other in order that when thought is evoked it may find data at hand — that is, material in shape to receive and respond to its exercise. "The manifold matter of ideas is brought before us, not only in the *systematic order of its qualitative relationships*, but in the rich *variety of local and temporal combinations*. . . . . The *combinations of heterogeneous ideas* . . . . forms the *problems*, in connection with which the efforts of thought to reduce coexistence to coherence will *subsequently* be made. The *homogeneous or similar* ideas, on the other hand, give occasion to separate, to connect, and to count their repetitions." (Vol. I, pp. 33, 34; italics mine.) Without the heterogeneous variety of the local and temporal juxtapositions there would be nothing to excite thought. Without the systematic arrangement of quality there would be nothing to meet thought and reward it for its efforts. The homogeneity of qualitative relationships, *in the pre-thought material*, gives the tools or instruments by which thought is enabled successfully to tackle the heterogeneity of collocations and conjunctions also found in the same material! One would suppose that when Lotze reached this point he might have been led to suspect that in this remarkable adjustment of thought-stimuli, thought-material, and thought-tools to one another, he must after all be dealing, not with something prior to the thought-function, but with the necessary elements in and of the thought-situation.

tative, and quales are made up on a common basis. They are degrees or grades of a common quality. Thus they have a certain ready-made setting of mutual distinction and reference which is already almost, if not quite, the effect of comparing, of relating, and these are the express traits of thinking.

It is easy to interpret this miraculous gift of grace in the light of what has been said. The data are in truth precisely that which is selected and set aside *as* present, as immediate. Thus they are *given* to *further* thought. But the selection has occurred in view of the need for thought; it is a listing of the capital in the way of the undisturbed, the undiscussed, which thought can count upon in this particular problem. Hence it is not strange that it has a peculiar fitness of adaptation for thought's further work. Having been selected with precisely that end in view, the wonder would be if it were not so fitted. A man may coin counterfeit money for use upon others, but hardly with the intent of passing it off upon himself.

Our only difficulty here is that the mind flies away from the logical interpretation of sense-datum to a ready-made notion of it brought over from abstract psychological inquiry. The belief in sensory quales as somehow forced upon us, and forced upon us at large, and thus conditioning thought wholly *ab extra*, instead of determining it as instrumentalities or elements in its own scheme, is too fixed. Such qualities *are* forced upon us, but *not* at large. The sensory data of experience, as distinct from the psychologists' constructs, always come *in a context;* they always appear as variations in a continuum of values. Even the thunder which breaks in upon me (to take the extreme of apparent discontinuity and irrelevancy) disturbs me because it is taken as a part of the same space-world as that in which my chair and room and house are located; and it is

taken as an influence which interrupts and disturbs, *because* it is part of my common world of causes and effects. The solution of continuity is itself practical or teleological, and thus presupposes and affects continuity of purpose, occupations, and means in a life-process. It is not metaphysics, it is biology which enforces the idea that actual sensation is not only determined as an event in a world of events,[1] but is an occurrence occurring at a certain period in the evolution of experience, marking a certain point in its cycle, and, consequently—having always its own conscious context and bearings—is a characteristic function of reconstruction in experience.[2]

2. *Forms of thinking data.*—As sensory datum is material set for the work of thought, so the ideational forms with which thought does its work are apt and prompt to meet the needs of the material. The "accessory"[3] notion of ground of coherence turns out, in truth, not to be a formal, or external, addition to the data, but a requalification of them. Thought is accessory as accomplice, not as addendum. "Thought" is to eliminate mere coincidence, and to assert grounded coherence. Lotze makes it absolutely clear that he does not at bottom conceive of "thought" as an activity "in itself" imposing a form of coherence; but that the organizing work of "thought" is only the progressive realization of an inherent unity, or system, in the material experience. The specific modes in which thought brings its "accessory" power to bear—names, conception, judgment, and inference—are successive stages in the adequate organization of the matter which comes to us first as datum; they are successive stages of the effort to overcome the

[1] *Supra*, p. 30.

[2] For the identity of sensory experience with the point of greatest strain and stress in conflicting or tensional experience, see "The Reflex Arc Concept in Psychology," *Psychological Review*, Vol. III, p. 57.

[3] For the "accessory" character of thought, see LOTZE, Vol. I, pp. 7, 25-7, 61, etc.

original defects of the datum. Conception starts from the given universal (the common element) of sense. Yet (and this is the significant point) it does not simply abstract this common element, and consciously generalize it as over against its own differences. Such a "universal" is *not* coherence, just because it does not *include* and dominate the temporal and local heterogeneity. The *true* concept (see Vol. I, p. 38) is a system of attributes, held together on the basis of some ground, or determining, dominating principle—a ground which so controls all its own instances as to make them into an inwardly connected whole, and so specifies its own limits as to be exclusive of all else. If we abstract color as the common element of various colors, the result is not a scientific idea or concept. Discovery of a process of light-waves whose various rates constitute the various colors of the spectrum gives the concept. And when we get such a concept, the former mere temporal abruptness of color experiences gives way to organic parts of a color system. The logical product—the concept, in other words—is not a formal seal or stamp ; it is a thoroughgoing transformation of data in a given sense.

The form or mode of thought which marks the continued transformation of the data and the idea in reference to each other is judgment. Judgment makes explicit the assumption of a principle which determines connection within an individualized whole. It definitely states red as *this* case or instance of the law or process of color, and thus overcomes further the defect in *subject-matter* or data still left by conception.[1] Now judgment logically terminates in disjunction.

[1]BOSANQUET, *Logic* (Vol. I, pp. 30-34), and JONES (*Philosophy of Lotze*, 1895, chap. 4) have called attention to a curious inconsistency in Lotze's treatment of judgment. On one hand, the statement is as given above. Judgment grows out of conception in making explicit the determining relation of universal to its own particular, implied in conception. But, on the other hand, judgment grows not out of conception at all, but out of the question of determining connection in change. Lotze's nominal reason for this latter view is that the conceptual world is purely static;

It gives a universal which may determine any one of a number of alternative defined particulars, but which is arbitrary as to *what* one is selected. Systematic *inference* brings to light the material conditions under which the law, or dominating universal, applies to this, rather than that alternative particular, and so completes the ideal organization of the subject-matter. If this act were complete, we should finally have present to us a whole on which we should know the determining and effective or authorizing elements, and the order of development or hierarchy of dependence, in which others follow from them.[1]

In this account by Lotze of the operations of the forms of thought, there is clearly put before us the picture of a

since the actual world is one of change, we need to pass upon what really goes together (is causal) in the change as distinct from such as are merely coincident. But, as Jones clearly shows, it is also connected with the fact that, while Lotze nominally asserts that judgment grows out of conception, he treats conception as the result of judgment since the first view makes judgment a mere explication of the content of an idea, and hence merely expository or analytic (in the Kantian sense) and so of more than doubtful applicability to reality. The affair is too large to discuss here, and I will content myself with referring to the oscillation between conflicting contents, and gradation of sensory qualities already discussed (p. 56, note). It is judgment which grows out of the former, because judgment is the whole situation as such; conception is referable to the latter because it *is* one abstraction within the whole (the solution of possible meanings of the data) just as the datum is another. In truth, since the sensory datum is not absolute, but comes in a historical context, the qualities apprehended as constituting the datum simply define the locus of conflict in the entire situation. They are attributives of the contents-in-tension of the colliding things, not calm untroubled ultimates. On pp. 33 and 34 of Vol. I, Lotze recognizes (as we have just seen) that, as matter of fact, it is both sensory qualities in their systematic grading, or quantitative determinations (see Vol. I, p. 43, for the recognition of the necessary place of the quantitative in the true concept), *and* the "rich variety of local and temporal combinations," that provoke thought and supply it with material. But, as usual, he treats this simply as a historical accident, not as furnishing the key to the whole matter. In fine, while the heterogeneous collocations and successions constitute the problematic element that stimulates thought,quantitative determination of the sensory quality furnishes one of the two chief means through which thought deals with the problem. It is a reduction of the original colliding contents to a form in which the effort at redintegration gets maximum efficiency. The concept, as ideal meaning, is of course the other partner to the transaction. It is getting the various possible meanings-of-the-data into such shape as to make them most useful in construing the data. The bearing of this upon the subject and predicate of judgment cannot be discussed here.

[1] See Vol. I, pp. 38, 59, 61, 105, 129, 197, for Lotze's treatment of these distinctions.

continuous correlative determination of datum on one side and of idea or meaning on the other, till experience is again integral, data thoroughly defined and corrected, and ideas completely incarnate as the relevant meaning of subject-matter. That we have here in outline a description of what actually occurs there can be no doubt. But there is as little doubt that it is thoroughly inconsistent with Lotze's supposition that the material or data of thought is precisely the same as the antecedents of thought; or that ideas, conceptions, are purely mental somewhats brought to bear, as the sole essential characteristics of thought, extraneously upon a material provided ready-made. It means but one thing: The maintenance of unity and wholeness in experience through conflicting contents occurs by means of a strictly correspondent setting apart of fact to be accurately described and properly related, and meaning to be adequately construed and properly referred. The datum is given *in* the thought-situation, and *to* further qualification of ideas or meanings. But even in this aspect it presents a problem. To find out *what is* given is an inquiry which taxes reflection to the uttermost. Every important advance in scientific method means better agencies, more skilled technique for simply detaching and describing what is barely there, or given. To be able to find out what can safely be taken as *there*, as given in any particular inquiry, and hence be taken as material for orderly and verifiable thinking, for fruitful hypothesis-making, for entertaining of explanatory and interpretative ideas, is one phase of the effort of systematic scientific inquiry. It marks its inductive phase. To take what is given *in* the thought-situation, for the sake of accomplishing the aim of thought (along with a correlative discrimination of ideas or meanings), as if it were given absolutely, or apart from a particular historic situs and context, is the fallacy of empiricism as a logical theory. To regard the thought-forms of conception,

judgment, and inference as qualifications of "pure thought, apart from any difference in objects," instead of as successive dispositions in the progressive organization of the material (or objects) is the fallacy of rationalism. Lotze attempts to combine the two, thinking thereby to correct each by the other.

Lotze recognizes the futility of thought if the sense-data are final, if they alone are real, the truly existent, self-justificatory and valid. He sees that, if the empiricist were right in his assumption as to the real worth of the given data, thinking would be a ridiculous pretender, either toilfully and poorly doing over again what needs no doing, or making a wilful departure from truth. He realizes that thought really is evoked because it is needed, and that it has a work to do which is not merely formal, but which effects a modification of the subject-matter of experience. Consequently he assumes a thought-in-itself, with certain forms and modes of action of its own, a realm of meaning possessed of a directive and normative worth of its own — the root-fallacy of rationalism. His attempted compromise between the two turns out to be based on the assumption of the indefensible ideas of both — the notion of an independent matter of thought, on one side, and of an independent worth or value of thought-forms, on the other.

This pointing out of inconsistencies becomes stale and unprofitable save as we bring them back into connection with their root-origin — the erection of distinctions that are genetic and historic, and working or instrumental divisions of labor, into rigid and ready-made differences of structural reality. Lotze clearly recognizes that thought's nature is dependent upon its aim, its aim upon its problem, and this upon the situation in which it finds its incentive and excuse. Its work is cut out for it. It does not what it would, but what it must. As Lotze puts it, "Logic has to do with thought,

not as it would be under hypothetical conditions, but as it is" (Vol. I, p. 33), and this statement is made in explicit combination with statements to the effect that the peculiarity of the material of thought conditions its activity. Similarly he says, in a passage already referred to: "The possibility and the success of thought's production in general depends upon this original constitution and organization of the whole world of ideas, a constitution which, though not necessary in thought, is all the more necessary to make thought possible."[1]

As we have seen, the essential nature of conception, judgment, and inference is dependent upon peculiarities of the propounded material, they being forms dependent for their significance upon the stage of organization in which they begin.

From this only one conclusion is suggested. If thought's nature is dependent upon its actual conditions and circumstances, the primary logical problem is to study thought-in-its-conditioning; it is to detect the crisis within which thought and its subject-matter present themselves in their mutual distinction and cross-reference. But Lotze is so thoroughly committed to a ready-made antecedent of some sort, that this genetic consideration is of no account to him. The historic method is a mere matter of psychology, and has no logical worth (Vol. I, p. 2). We must presuppose a psychological mechanism and psychological material, but logic is concerned not with origin or history, but with authority, worth, value (Vol. I, p. 10). Again: "Logic is not concerned with the manner in which the elements utilized by thought come into existence, but their value *after* they have somehow come into existence, for the carrying out of intellectual operations" (Vol. I, p. 34). And finally: "I have maintained throughout my work that logic cannot derive any serious advantage from a discussion

[1] Vol. I, p. 36; see also Vol. II, pp. 290, 291.

of *the conditions under which thought as a psychological process comes about.* The significance of logical forms. . . . is to be found in the utterances of thought, the laws which it imposes, after or during the act of thinking, not in the conditions which lie back of and which produce thought."[1]

Lotze, in truth, represents a halting-stage in the evolution of logical theory. He is too far along to be contented with the reiteration of the purely formal distinctions of a merely formal thought-by-itself. He recognizes that thought as formal is the form of some matter, and has its worth only as organizing that matter to meet the ideal demands of reason; and that "reason" is in truth only an ideal systematization of the matter or content. Consequently he has to open the door to admit "psychical processes" which furnish this material. Having let in the material, he is bound to shut the door again in the face of the processes from which the material proceeded — to dismiss them as impertinent intruders. If thought gets its data in such a surreptitious manner, there is no occasion for wonder that the legitimacy of its dealings with the material remains an open question. Logical theory, like every branch of the philosophic disciplines, waits upon a surrender of the obstinate conviction that, while the work and aim of thought is conditioned by the material supplied to it, yet the *worth* of its performances is something to be passed upon in complete abstraction from conditions of origin and development.

[1] Vol. II, p. 246 ; the same is reiterated in Vol. II, p. 250, where the question of origin is referred to as a corruption in logic. Certain psychical acts are necessary as "conditions and occasions" of logical operations, but the "deep gulf between psychical mechanism and thought remains unfilled."

IV

THOUGHT AND ITS SUBJECT-MATTER: THE CONTENT AND OBJECT OF THOUGHT

In the foregoing discussion, particularly in the last chapter, we were led repeatedly to recognize that thought has its own content. At times Lotze gives way to the tendency to define thought entirely in terms of modes and forms of activity which are exercised by it upon a strictly foreign material. But two motives continually push him in the other direction. (1) Thought has a distinctive work to do, one which involves a qualitative transformation of (at least) the *relationships* of the presented matter; as fast as it accomplishes this work, the subject-matter becomes somehow thought's own. As we have just seen, the data are progressively organized to meet thought's ideal of a complete whole, with its members interconnected according to a determining principle. Such progressive organization throws backward doubt upon the assumption of the original total irrelevancy of the data and thought-form to each other. (2) A like motive operates from the side of the subject-matter. As merely foreign and external, it is too heterogeneous to lend itself to thought's exercise and influence. The idea, as we saw in the first chapter, is the convenient medium through which Lotze passes from the purely heterogeneous psychical impression or event, which is totally irrelevant to thought's purpose and working, over to a state of affairs which can reward thought. Idea as meaning forms the bridge from the brute factuality of the psychical impression over to the coherent value of thought's own content.

We have, in this chapter, to consider the question of the idea or content of thought from two points of view: first, the *possibility* of such a content — its consistency with Lotze's fundamental premises; secondly, its *objective* character — its validity and test.

I. The question of the possibility of a specific content of thought is the question of the nature of the idea as meaning. Meaning is the characteristic content of thought as such. We have thus far left unquestioned Lotze's continual assumption of meaning as a sort of thought-unit; the building-stone of thought's construction. In his treatment of meaning, Lotze's contradictions regarding the antecedents, data, and content of thought reach their full conclusion. He expressly makes meaning to be the product of thought's activity and also the unreflective material out of which thought's operations grow.

This contradiction has been worked out in accurate and complete detail by Professor Jones.[1] He summarizes it as follows (p. 99): "No other way was left to him [Lotze] excepting this of first attributing all to sense and afterwards attributing all to thought, and, finally of attributing it to thought only because it was already in its material. This *seesaw* is essential to his theory; the elements of knowledge as he describes them can subsist only by the alternate robbery of each other." We have already seen how strenuously Lotze insists upon the fact that the given subject-matter of thought is to be regarded wholly as the work of a physical mechanism, "without any action of thought."[2] But Lotze also states that if the products of the psychical mechanism "are to admit of combination in the definite form of a *thought*, they each require some previous shaping to make them into

[1] *Philosophy of Lotze*, chap. 3, "Thought and the Preliminary Process of Experience."

[2] Vol. I, p. 38.

logical building-stones and to convert them from *impressions* into *ideas*. Nothing is really more familiar to us than this first operation of thought; the only reason why we usually overlook it is that in the language which we inherit, it is already carried out, and it seems, therefore, to belong to the self-evident presuppositions of thought, *not to its own specific work*."[1] And again (Vol. I, p. 23) judgments "can consist of nothing but combinations of ideas which are no longer mere impressions: every such idea must have undergone at least the simple formation mentioned above." Such ideas are, Lotze goes on to urge, already rudimentary concepts—that is to say, logical determinations.

The obviousness of the logical contradiction of attributing to a preliminary specific work of thought exactly the condition of affairs which is elsewhere explicitly attributed to a psychical mechanism prior to any thought-activity, should not blind us to its meaning and relative necessity. The impression, it will be recalled, is a mere state of our own consciousness — a mood of ourselves. As such it has simply *de facto* relations as an event to other similar events. But reflective thought is concerned with the relationship of a content or matter to other contents. Hence the impression must have a matter before it can come at all within the sphere of thought's exercise. How shall it secure this? Why, by a preliminary activity of thought which objectifies the impression. Blue as a mere sensuous irritation or feeling is given a quality, the meaning "blue" —blueness; the sense-impression is objectified; it is presented "no longer as a condition which we undergo, but as a something which has its being and its meaning in itself, and which continues to be what it is, and to mean what it means whether we are conscious of it or not. It is easy to see here the *necessary beginning of that activity which we*

[1] Vol. I, p. 13; last italics mine.

above appropriated to thought as such : it has not yet got so far as converting coexistence into coherence. It has first to perform the previous task of investing each single impression with an independent validity, without which the later opposition of their real coherence to mere coexistence could not be made in any intelligible sense."[1]

This objectification, which converts a sensitive state into a sensible matter to which the sensitive state is referred, also gives this matter "position," a certain typical character. It is not objectified in a merely general way, but is given a specific sort of objectivity. Of these kinds of objectivity there are three mentioned: that of a substantive content; that of an attached dependent content; that of an active relationship connecting the various contents with each other. In short, we have the types of meaning embodied in language in the form of nouns, adjectives, and verbs. It is through this preliminary formative activity of thought that reflective or *logical* thought has presented to it a world of meanings ranged in an order of relative independence and dependence, and ranged as elements in a complex of meanings whose various constituent parts mutually influence each other's meanings.[2]

As usual, Lotze mediates the contradiction between material constituted *by* thought and the same material just presented *to* thought, by a further position so disparate to each that, taken in connection with each in a pair, and by turns, it seems to bridge the gulf. After describing the prior constitutive work of thought as above, he goes on to discuss a *second* phase of thought which is intermediary between this and the third phase, viz., reflective thought proper. This second activity is that of arranging experi-

[1] Vol. I, p. 14; italics mine.

[2] See Vol. I, pp. 16-20. On p. 22 this work is declared to be not only the first, but the most indispensable of all thought's operations.

enced quales in series and groups, thus ascribing a sort of universal or common somewhat to various instances (as already described ; see p. 55). On one hand, it is clearly stated that this second phase of thought's activity is in reality the *same* as the first phase : since all objectification involves positing, since positing involves distinction of one matter from others, and since this involves placing it in a series or group in which each is measurably marked off, as to the degree and nature of its diversity, from every other. We are told that we are only considering "a really inseparable operation" of thought from two different sides : first, as to the effect which objectifying thought has upon the matter as set over against the feeling *subject,* secondly, the effect which this objectification has upon the matter in relation to *other matters.*[1] Afterward, however, these two operations are declared to be radically different in type and nature. The first is determinant and formative ; it gives ideas "the shape without which the logical spirit could not accept them." In a way it dictates "its own laws to its object-matter."[2] The second activity of thought is rather passive and receptive. It simply recognizes what is already there. "Thought can make no difference where it finds none already in the matter of impressions."[3] "The first universal, as we saw, can only be experienced in immediate sensation. It is no product of thought, but something that thought finds already in existence."[4]

[1] Vol. I, p. 26.

[2] Vol. I, p. 35.

[3] Vol. I, p. 36 ; see the strong statements already quoted, p. 30. What if this canon were applied in the first act of thought referred to above : the original objectification which transforms the mere state into an abiding quality or meaning? Suppose, that is, it were said that the first objectifying act cannot make a substantial (or attached) quale out of a mere state of feeling; it must *find* the distinction it makes there already! It is clear we should at once get a *regressus ad infinitum.* We here find Lotze face to face with this fundamental dilemma: thought either arbitrarily forces in its own distinctions, or else just repeats what is already there — is either falsifying or futile. This same contradiction, so far as it affects the impression, has already been discussed. See p. 31.

[4] Vol. I, p. 31.

The obviousness of this further contradiction is paralleled only by its inevitableness. Thought is in the air, is arbitrary and wild in dealing with meanings, unless it gets its start and cue from actual experience. Hence the necessity of insisting upon thought's activity as just recognizing the contents already given. But, on the other hand, prior to the work of thought there is to Lotze no content or meaning. It requires a work of thought to detach anything from the flux of sense-irritations and invest it with a meaning of its own. This dilemma is inevitable to any writer who declines to consider as correlative the nature of thought-activity and thought-content from the standpoint of their generating conditions in the movement of experience. Viewed from such a standpoint the principle of solution is clear enough. As we have already seen (p. 53), the internal dissension of an experience leads to detaching certain values previously absorptively integrated into the concrete experience as part of its own qualitative coloring; and to relegating them, for the time being, (pending integration into further immediate values of a reconstituted experience) into a world of bare meanings, a sphere qualified as ideal throughout. These meanings then become the tools of thought in interpreting the data, just as the sense-qualities which define the presented situation are the immediate object to thought. The two *as mutually referred* are content. That is, the datum and the thought-mode or idea as connected are the object of thought.

To reach this unification is thought's objective or goal. Exactly the same value is idea, as either tool or content, according as it is taken as instrumental or as accomplishment. Every successive cross-section of the thought-situation presents what may be taken for granted as the outcome of previous thinking, and consequently as the determinant of further reflective procedure. Taken as defining the point reached in the thought-function and serving as constituent

unit of further thought, it is content. Lotze's instinct is sure in identifying and setting over against each other the material given to thought and the content which is thought's own "building-stone." His contradictions arise simply from the fact that his absolute, non-historic method does not permit him to interpret this joint identity and distinction in a working, and hence relative, sense.

II. The question of how the possibility of meanings, or thought-contents, is to be understood merges imperceptibly into the question of the real objectivity or validity of such contents. The difficulty for Lotze is the now familiar one: So far as his logic compels him to insist that these meanings are the possession and product of thought (since thought is an independent activity), the ideas are merely ideas; there is no test of objectivity beyond the thoroughly unsatisfactory and formal one of their own mutual consistency. In reaction from this Lotze is thrown back upon the idea of these contents as the original matter given in the impressions themselves. Here there seems to be an objective or external test by which the reality of thought's operations may be tried ; a given idea is verified or found false according to its measure of correspondence with the matter of experience as such. But now we are no better off. The original independence and heterogeneity of impressions and of thought is so great that there is no way to compare the results of the latter with the former. We cannot compare or contrast distinctions of worth with bare differences of factual existence (Vol. I, p. 2). The standard or test of objectivity is so thoroughly external that by original definition it is wholly outside the realm of thought. How can thought compare its own contents with that which is wholly outside itself ?

Or again, the given material of experience apart from thought is precisely the relatively chaotic and unorganized; it even reduces itself to a mere sequence of psychical events.

What rational meaning is there in directing us to compare the highest results of scientific inquiry with the bare sequence of our own states of feeling; or even with the original data whose fragmentary and uncertain character was the exact motive for entering upon scientific inquiry? How can the former in any sense give a check or test of the value of the latter? This is professedly to test the validity of a system of meanings by comparison with that whose defects and errors call forth the construction of the system of meanings by which to rectify and replace themselves. Our subsequent inquiry simply consists in tracing some of the phases of the characteristic seesaw from one to the other of the two horns of the now familiar dilemma: either thought is separate from the matter of experience, and then its validity is wholly its own private business; or else the objective results of thought are already in the antecedent material, and then thought is either unnecessary, or else has no way of checking its own performances.

1. Lotze assumes, as we have seen, a certain independent validity in each meaning or qualified content, taken in and of itself. "Blue" has a certain validity, or meaning, in and of itself; it is an object for consciousness as such. After the original sense-irritation through which it was mediated has entirely disappeared, it persists as a valid idea, as a meaning. Moreover, it is an object or content of thought for others as well. Thus it has a double mark of validity: in the comparison of one part of my own experience with another, and in the comparison of my experience as a whole with that of others. Here we have a sort of validity which does not raise at all the question of *metaphysical* reality (Vol. I, pp. 14, 15). Lotze thus seems to have escaped from the necessity of employing as check or test for the validity of ideas any reference to a real outside the sphere of thought itself. Such terms as "conjunction," "fran-

chise," "constitution," "algebraic zero," etc., etc., claim to possess objective validity. Yet none of these professes to refer to a reality beyond thought. Generalizing this point of view, validity or objectivity of meaning means simply that which is "identical for all consciousness" (Vol. I, p. 3); "it is quite indifferent whether certain parts of the world of thought indicate something which has beside an independent reality outside of thinking minds, or whether all that it contains exists only in the thoughts of those who think it, but with equal validity for them all" (Vol. I, p. 16).

So far it seems clear sailing. Difficulties, however, show themselves, the moment we inquire what is meant by a self-identical content for all thought. Is this to be taken in a static or in a dynamic way? That is to say: Does it express the fact that a given content or meaning is *de facto* presented to the consciousness of all alike? Does this coequal presence guarantee an objectivity? Or does validity attach to a given meaning or content in so far as it directs and controls the further exercise of thinking, and thus the formation of further *new* contents of consciousness?

The former interpretation is alone consistent with Lotze's notion that the independent idea as such is invested with a certain validity or objectivity. It alone is consistent with his assertion that concepts precede judgments. It alone, that is to say, is consistent with the notion that reflective thinking has a sphere of ideas or meanings supplied to it at the outset. But it is impossible to entertain this belief. The stimulus which, according to Lotze, goads thought on from ideas or concepts to judgments and inferences, is in truth simply the lack of validity, of objectivity in its original independent meanings or contents. A meaning as independent is precisely that which is not invested with validity, but which is a mere idea, a "notion," a fancy, at best a surmise which may turn out to be valid (and of course

this indicates possible reference); a standpoint to have its value determined by its further active use. "Blue" as a mere detached floating meaning, an idea at large, would not gain in validity simply by being entertained continuously in a given consciousness; or by being made at one and the same time the persistent object of attentive regard by all human consciousnesses. If this were all that were required, the chimera, the centaur, or any other subjective construction, could easily gain validity. "Christian Science" has made just this notion the basis of its philosophy.

The simple fact is that in such illustrations as "blue," "franchise," "conjunction," Lotze instinctively takes cases which are not mere independent and detached meanings, but which involve reference to a region of cosmic experience, or to a region of mutually determining social activities. The conception that reference to a *social* activity does not involve the same sort of reference of thought beyond itself that is involved in physical matters, and hence may be taken quite innocent and free of the metaphysical problem of reference to reality beyond meaning, is one of the strangest that has ever found lodgment in human thinking. Either both physical and social reference or neither, is metaphysical; if neither, then it is because the meaning functions, as it originates, in a specific situation which carries with it its own tests (see p. 17). Lotze's conception is made possible only by unconsciously substituting the idea of object as content of thought for a large number of persons (or a *de facto* somewhat for every consciousness), for the genuine definition of object as a determinant in a scheme of experience. The former is consistent with Lotze's conception of thought, but wholly indeterminate as to validity or intent. The latter is the test used experimentally in all concrete thinking, but involves a radical transformation of all Lotze's assumptions. A given idea of the conjunction of the franchise, or

of blue, is valid, not because everybody happens to entertain it, but because it expresses the factor of control or direction in a given movement of experience. The test of validity of idea[1] is its functional or instrumental use in effecting the transition from a relatively conflicting experience to a relatively integrated one. If Lotze's view were correct, "blue" valid once would be valid always — even when red or green were actually called for to fulfil specific conditions. This is to say validity always refers to rightfulness or adequacy of performance in an asserting of connection — not to the meaning as detached and contemplated.

If we refer again to the fact that the genuine antecedent of thought is a situation which is tensional as regards its existing status, or disorganized in its structural elements, yet organized as emerging out of the unified experience of the past and as striving as a whole, or equally in all its phases, to reinstate an experience harmonized in make-up, we can easily understand how certain contents may be detached and held apart as meanings or references, actual or possible (according as they are viewed with reference to the past or to the future). We can understand how such detached contents may be of use in effecting a review of the entire experience, and as affording standpoints and methods of a reconstruction which will maintain the integrity of experience. We can understand how validity of meaning is measured by reference to something which is not mere meaning; by reference to something which lies beyond the idea as such — viz., the reconstitution of an experience into which thought enters as mediator. That paradox of ordinary experience and of scientific inquiry by which objectivity is given alike to matter of perception and to conceived relations

[1] As we have already seen, the concept, the meaning as such, is always a factor or status in a reflective situation; it is always a predicate of judgment, in use in interpreting and developing the logical subject, or datum of perception. See Study VII, on the Hypothesis.

—to facts and to laws—affords no peculiar difficulty, because we see that the test of objectivity is everywhere the same: anything is objective in so far as, through the medium of conflict, it controls the movement of experience in its reconstructive transition from one unified form to another. There is not first an object, whether of sense-perception or of conception, which afterward somehow exercises this controlling influence; but the objective is such in virtue of the exercise of function of control. It may only control the act of inquiry; it may only set on foot doubt, but this is direction of subsequent experience, and, in so far, is a token of objectivity.

So much for the thought-content or meaning as having a validity of its own. It does not have it as isolated or given or static; it has it in its dynamic reference, its use in determining further movement of experience. In other words, the "meaning" or idea as such, having been selected and made-up with reference to performing a certain office in the evolution of a unified experience, can be tested in no other way than by discovering whether it does what it was intended to do and what it purports to do.[1]

2. Lotze has to wrestle with this question of validity in a further aspect: What constitutes the objectivity of thinking as a total attitude, activity, or function? According to his own statement, the meanings or valid ideas are after all only building-stones for logical thought. Validity is thus not a question of them in their independent existences, but of their mutual reference to each other. Thinking is the process of

[1] ROYCE, in his *World and Individual*, Vol. I, chaps. 6 and 7, has criticised the conception of meaning as valid, but in a way which implies that there is a difference between validity and reality, in the sense that the meaning or content of the valid idea becomes real only when it is experienced in direct feeling. The above implies, of course, a difference between validity and reality, but finds the test of validity in exercise of the function of direction or control to which the idea makes pretension or claim. The same point of view would profoundly modify Royce's interpretation of what he terms "inner" and "outer" meaning. See MOORE, *The University of Chicago Decennial Publications*, Vol. III, on "Existence, Meaning, and Reality."

instituting these mutual references; of building up the various scattered and independent building-stones into the coherent system of thought. What is the validity of the various forms of thinking which find expression in the various types of judgment and in the various forms of inference? Categorical, hypothetical, disjunctive judgment; inference by induction, by analogy, by mathematical equation; classification, theory of explanation—all these are processes of reflection by which mutual connection in an individualized whole is given to the fragmentary meanings or ideas with which thought as it sets out is supplied. What shall we say of the validity of such processes?

On one point Lotze is quite clear. These various logical acts do not really enter into the constitution of the valid world. The logical forms as such are maintained *only* in the process of thinking. The world of valid truth does not undergo a series of contortions and evolutions, paralleling in any way the successive steps and missteps, the succession of tentative trials, withdrawals, and retracings, which mark the course of our own thinking.[1]

Lotze is explicit upon the point that it is only the thought-content in which the process of thinking issues that has objective validity; the act of thinking is "purely and simply an inner movement of our own minds, made necessary to us by reason of the constitution of our nature and of our place in the world" (Vol. II, p. 279).

Here the problem of validity presents itself as the problem of the relation of the act of thinking to its own product.

[1] Vol. II, pp. 257, 265 and in general Book III, chap. 4. It is significant that thought itself, appearing as an act of thinking over against its own content, is here treated as psychical. Even this explicit placing of thinking in the psychical sphere, along with sensations and the associative mechanism, does not, however, lead Lotze to reconsider his statement that the psychological problem is totally irrelevant and even corrupting as regards the logical. Consequently, as we see in the text, it only gives him one more difficulty to wrestle with: how a process which is *ex officio* purely psychical and subjective can yet yield results which are valid, in a logical, to say nothing of an ontological, sense.

In his solution Lotze uses two metaphors: one derived from building operations, the other from traveling. The construction of a building requires of necessity certain tools and extraneous constructions, stagings, scaffoldings, etc., which are necessary to effect the final construction, but yet which do not enter into the building as such. The activity has an instrumental, though not a constitutive, value as regards its product. Similarly, in order to get a view from the top of a mountain—this view being the objective—the traveler has to go through preliminary movements along devious courses. These again are antecedent prerequisites, but do not constitute a portion of the attained view.

The problem of thought as activity, as distinct from thought as content, opens up altogether too large a question to receive complete consideration at this point. Fortunately, however, the previous discussion enables us to narrow the point which is in issue just here. It is once more the question whether the activity of thought is to be regarded as an independent function supervening entirely from without upon antecedents, and directed from without upon data; or whether it marks merely a phase of the transformation which the course of experience (whether practical, or artistic, or socially affectional or whatever) undergoes in entering into a tensional status where the maintenance of its harmony of content is problematic and hence an aim. If it be the latter, a thoroughly intelligent sense can be given to the proposition that the activity of thinking is instrumental, and that its worth is found, not in its own successive states as such, but in the result in which it comes to conclusion. But the conception of thinking as an independent activity somehow occurring after an independent antecedent, playing upon an independent subject-matter, and finally effecting an independent result, presents us with just one miracle the more.

I do not question the strictly instrumental character of thinking. The problem lies not here, but in the interpretation of the nature of the organ and instrument. The difficulty with Lotze's position is that it forces us into the assumption of a means and an end which are simply and only external to each other, and yet necessarily dependent upon each other — a position which, whenever found, is so thoroughly self-contradictory as to necessitate critical reconsideration of the premises which lead to it. Lotze vibrates between the notion of thought as a tool in the external sense, a mere scaffolding to a finished building in which it has no part nor lot, and the notion of thought as an immanent tool, as a scaffolding which is an integral part of the very operation of building, and set up for the sake of the building-activity which is carried on effectively only with and through a scaffolding. Only in the former case can the scaffolding be considered as a *mere* tool. In the latter case the external scaffolding is not itself the instrumentality; the actual tool is the *action* of erecting the building, and this action involves the scaffolding as a constituent part of itself. The work of erecting is not set over against the completed building as mere means to an end; it *is* the end taken in process or historically, longitudinally viewed. The scaffolding, moreover, is not an external means to the process of erecting, but an organic member of it. It is no mere accident of language that "building" has a double sense — meaning at once the process and the finished product. The outcome of thought is the thinking activity carried on to its own completion; the activity, on the other hand, *is* the outcome taken anywhere short of its own realization, and thereby still going on.

The only consideration which prevents easy and immediate acceptance of this view is the notion of thinking as something purely formal. It is strange that the empiricist

does not see that his insistence upon a matter extraneously given to thought only strengthens the hands of the rationalist with his claim of thinking as an independent activity, separate from the actual make-up of the affairs of experience. Thinking as a merely formal activity exercised upon certain sensations or images or objects sets forth an absolutely meaningless proposition. The psychological identification of thinking with the process of association is much nearer the truth. It is, indeed, on the way to the truth. We need only to recognize that association is of contents or matters or meanings, not of ideas as bare existences or events; and that the type of association we call thinking differs from the associations of casual fancy and revery in an element of control by reference to an end which determines the fitness and thus the selection of the associates, to apprehend how completely thinking is a reconstructive movement of actual contents of experience in relation to each other, and for the sake of a redintegration of a conflicting experience.

There is no miracle in the fact that tool and material are adapted to each other in the process of reaching a valid conclusion. Were they external in origin to each other and to the result, the whole affair would, indeed, present an insoluble problem — so insoluble that, if this were the true condition of affairs, we never should even know that there was a problem. But, in truth, both material and tool have been secured and determined with reference to economy and efficiency in effecting the end desired — the maintenance of a harmonious experience. The builder has discovered that his building means building tools, and also building material. Each has been slowly evolved with reference to its fit employ in the entire function; and this evolution has been checked at every point by reference to its own correspondent. The carpenter has not thought at large on his building and

then constructed tools at large, but has thought of his building in terms of the material which enters into it, and through that medium has come to the consideration of the tools which are helpful. Life proposes to maintain at all hazards the unity of its own process. Experience insists on being itself, on securing integrity even through and by means of conflict.

This is not a formal question, but one of the placing and relations of the matters or values actually entering into experience. And this in turn determines the taking up of just those mental attitudes, and the employing of just those intellectual operations, which most effectively handle and organize the material. Thinking is adaptation *to* an end *through* the adjustment of particular objective contents.

The thinker, like the carpenter, is at once stimulated and checked in every stage of his procedure by the particular situation which confronts him. A person is at the stage of wanting a new house: well then, his materials are available resources, the price of labor, the cost of building, the state and needs of his family, profession, etc.; his tools are paper and pencil and compass, or possibly the bank as a credit instrumentality, etc. Again, the work is beginning. The foundations are laid. This in turn determines its own specific materials and tools. Again, the building is almost ready for occupancy. The concrete process is that of taking away the scaffolding, clearing up the grounds, furnishing and decorating rooms, etc. This specific operation again determines its own fit or relevant materials and tools. It defines the time and mode and manner of beginning and

1 Professor James's satisfaction in the contemplation of bare pluralism, of disconnection, of radical having-nothing-to-do-with-one-another, is a case in point. The satisfaction points to an æsthetic attitude in which the brute diversity becomes itself one interesting object; and thus unity asserts itself in its own denial. When discords are hard and stubborn, and intellectual and practical unification are far to seek, nothing is commoner than the device of securing the needed unity by recourse to an emotion which feeds on the very brute variety. Religion and art and romantic affection are full of examples.

ceasing to use them. Logical theory will get along as well as does reflective practice, when it sticks close by and observes the directions and checks inherent in each successive phase of the evolution of the cycle of experiencing. The problem in general of validity of the thinking process as distinct from the validity of this or that process arises only when thinking is isolated from its historic position and its material context.

3. But Lotze is not yet done with the problem of validity, even from his own standpoint. The ground shifts again under his feet. It is no longer a question of the validity of the idea or meaning with which thought is supposed to set out; it is no longer a question of the validity of the process of thinking in reference to its own product; it is the question of the validity of the product. Supposing, after all, that the final meaning, or logical idea, is thoroughly coherent and organized; supposing it is an object for all consciousness as such. Once more arises the question: What is the validity of even the most coherent and complete idea?—a question which rises and will not down. We may reconstruct our notion of the chimera until it ceases to be an independent idea and becomes a part of the system of Greek mythology. Has it gained in validity in ceasing to be an independent myth, in becoming an element in systematized myth? Myth it was and myth it remains. Mythology does not get validity by growing bigger. How do we know the same is not the case with the ideas which are the product of our most deliberate and extended scientific inquiry? The reference again to the content as the self-identical object of all consciousness proves nothing; the matter of a hallucination does not gain worth in proportion to its social contagiousness. Or the reference proves that we have not as yet reached any conclusion, but are entertaining a hypothesis—since social validity is not a matter of

mere common content, but of securing participation in a commonly adjudged social experience through action directed thereto and directed by consensus of judgment.

According to Lotze, the final product is, after all, still thought. Now, Lotze is committed once for all to the notion that thought, in any form, is directed by and at an outside reality. The ghost haunts him to the last. How, after all, does even the ideally perfect valid thought apply or refer to reality? Its genuine subject is still beyond itself. At the last Lotze can dispose of this question only by regarding it as a metaphysical, not a logical, problem (Vol. II, pp. 281, 282). In other words, *logically* speaking, we are at the end just exactly where we were at the beginning—in the sphere of ideas, and of ideas only, plus a consciousness of the necessity of referring these ideas to a reality which is beyond them, which is utterly inaccessible to them, which is out of reach of any influence which they may exercise, and which transcends any possible comparison with their results. "It is vain," says Lotze, "to shrink from acknowledging the circle here involved . . . . all we know of the external world depends upon the ideas of it which are within us" (Vol. II, p. 185). "It is then this varied world of ideas within us which forms the sole material directly given to us" (Vol. II, p. 186). As it is the only material given to us, so it is the only material with which thought can end. To talk about knowing the external world through ideas which are merely within us is to talk of an inherent self-contradiction. There is no common ground in which the external world and our ideas can meet. In other words, the original implication of a separation between an independent thought-material and an independent thought-function and purpose lands us inevitably in the metaphysics of subjective idealism, plus a belief in an unknown reality beyond, which unknowable is yet taken as the ultimate test of the value of our ideas as just

subjective. The subjectivity of the psychical event infects at the last the meaning or ideal object. Because it has been taken to be something "in itself," thought is also something "in itself," and at the end, after all our maneuvering we are where we began: — with two separate disparates, one of meaning, but no existence, the other of existence, but no meaning.

The other aspect of Lotze's contradiction which completes the circle is clear when we refer to his original propositions, and recall that at the outset he was compelled to regard the origination and conjunctions of the impressions, the elements of ideas, as themselves the effects exercised by a world of things already in existence (see p. 31). He sets up an independent world of thought, and yet has to confess that both at its origin and termination it points with absolute necessity to a world beyond itself. Only the stubborn refusal to take this initial and terminal reference of thought beyond itself as having a historic meaning, indicating a particular place of generation and a particular point of fulfilment in the drama of evolving experience, compels Lotze to give such bifold objective reference a purely metaphysical turn.

When Lotze goes on to say (Vol. II, p. 191) that the measure of truth of particular parts of experience is found in asking whether, when judged by thought, they are in harmony with other parts of experience; when he goes on to say that there is no sense in trying to compare the entire world of ideas with a reality which is non-existent, excepting as it itself should become an idea, Lotze lands where he might better have frankly commenced.[1] He saves himself from utter

[1] Lotze even goes so far in this connection as to say that the antithesis between our ideas and the objects to which they are directed is itself a part of the world of ideas (Vol. II, p. 192). Barring the phrase "world of *ideas*" (as against world of continuous experiencing) he need only have commenced at this point to have traveled straight and arrived somewhere. But it is absolutely impossible to hold both this view and that of the original independent existence of something given to and in thought and an independent existence of a thought-activity, thought-forms, and thought-contents.

skepticism only by claiming that the explicit assumption of skepticism, the need of agreement of a ready-made idea as such, with an extraneous independent material as such, is meaningless. He defines correctly the work of thought as consisting in harmonizing the various portions of experience with each other: a definition which has meaning only in connection with the fact that experience is continually integrating itself into a wholeness of coherent meaning deepened in significance by passing through an inner distraction in which by means of conflict certain contents are rendered partial and hence objectively conscious. In this case the test of thought is the harmony or unity of experience actually effected. In that sense the test of reality is beyond thought, as thought, just as at the other limit thought originates out of a situation which is not reflectional in character. Interpret this before and beyond in a historic sense, as an affair of the place occupied and rôle played by thinking as a function in experience in relation to other functions, and the intermediate and instrumental character of thought, its dependence upon unreflective antecedents for its existence, and upon a consequent experience for its test of final validity, becomes significant and necessary. Taken at large, it plunges us in the depths of a hopelessly complicated and self-revolving metaphysic.

V

A CRITICAL STUDY OF BOSANQUET'S THEORY OF JUDGMENT[1]

BOSANQUET'S theory of the judgment, in common with all such theories of the judgment, necessarily involves the metaphysical problem of the nature of reality and of the relation of thought to reality. That the judgment is the function by which knowledge is attained is a proposition which would meet with universal acceptance. But knowledge is itself a relation of some sort between thought and reality. The view which any logician adopts as to the nature of the knowledge-process is accordingly conditioned by his metaphysical presuppositions as to the nature of reality. It is equally true that the theory of the judgment developed from any metaphysical standpoint serves as a test of the validity of that standpoint. We shall attempt in the present paper to show how Bosanquet's theory of the judgment develops from his view of the nature of reality, and to inquire whether the theory succeeds in giving such an account of the knowledge-process as to corroborate the presupposition underlying it.

Bosanquet defines judgment as "the intellectual function which defines reality by significant ideas and in so doing affirms the reality of those ideas" (p. 104).[2] The form of the definition suggests the nature of his fundamental prob-

[1] The criticism of Bosanquet's theory of the judgment offered in this paper is from the standpoint of the theory of the judgment developed by Professor John Dewey, in his lectures on "The Theory of Logic." While the chief interest of the paper, as the title implies, is critical, it has been necessary to devote a portion of it to the exposition of the point of view from which the criticism is made.—H. B. T.

[2] The references throughout this paper are to the pages of Vol. I of BERNARD BOSANQUET, *Logic or the Morphology of Knowledge*, Oxford, 1888.

lem. There is, on the one hand, a world of reality which must be regarded as having existence outside of and independently of the thoughts or ideas we are now applying to it; and there is, on the other hand, a world of ideas whose value is measured by the possibility of applying them to reality, of qualifying reality by them. The judgment is the function which makes the connection between these two worlds. If judgment merely brought one set of ideas into relation with another set, then it could never give us anything more than purely hypothetical knowledge whose application to the real world would remain forever problematic. It would mean that knowledge is impossible, a result which seems to be contradicted by the existence of knowledge. The logician must, therefore, as Bosanquet tells us, regard it as an essential of the act of judgment that it always refers to a reality which goes beyond and is independent of the act itself (p. 104). His central problem thus becomes that of understanding what the nature of reality is which permits of being defined by ideas, and what the nature of an idea is that it can ever be affirmed to be real. How does the real world get representation in experience, and what is the guarantee that the representation, when obtained, is correct?

The defining of the problem suggests the view of the nature of reality out of which Bosanquet's theory of the judgment grows. The real world is to him a world which has its existence quite independently of the process by which it is known. The real world is there to be known, and is in no wise modified by the knowledge which we obtain of it. The work of thought is to build up a world of ideas which shall represent, or correspond to, the world of reality. The more complete and perfect the correspondence, the greater our store of knowledge.

Translated into terms of the judgment, this representa-

tional view means that the subject of the judgment must always be reality, while the predicate is an idea. But when we examine the content of any universal judgment, or even of an ordinary judgment of perception, the subject which appears in the judgment is evidently not reality at all, if by reality we mean something which is in no sense constituted by the thought-process. When I say, "The tree is green," the subject, tree, cannot be regarded as a bit of reality which is given ready-made to the thought-process. The ability to perceive a tree, to distinguish it from other objects and single it out for the application of an idea, evidently implies a long series of previous judgments. The content "tree" is itself ideal. As Bosanquet forcibly states it: "If a sensation or elementary perception is in consciousness (and if not we have nothing to do with it in logic), it already bears the form of thinking" (p. 33). How, then, can it serve as the subject of a judgment? Bosanquet's solution of the problem is to say that the real subject of a judgment is not the grammatical subject which appears in a proposition, but reality itself. In the more complex forms of judgment the reference to reality is disguised by the introduction of explicit ideas to designate the portion of reality to which reference is made (pp. 78, 79). In the simplest type of judgment known, however, the qualitative judgment of perception, the reference to reality appears within the judgment itself. The relations of thought to reality and of the elements of the judgment to one another can, accordingly, most readily be seen in the consideration of this rudimentary form of judgment in which the various parts lie bare before us.

Bosanquet describes it as follows:

> If I say, pointing to a particular house, "That is my home," it is clear that in this act of judgment the reference conveyed by the demonstrative is indispensable. The significant idea "my home"

is affirmed, not of any other general significant idea in my mind, but of something which is rendered unique by being present to me in perception In making the judgment, "That is my home," I extend the present sense-perception of a house in a certain landscape by attaching to it the ideal content or meaning of "home;" and moreover, in doing this, I pronounce the ideal content to be, so to speak, of one and the same tissue with what I have before me in my actual perception That is to say, I affirm the meaning of the idea, or the idea considered as a meaning, to be a real quality of that which I perceive in my perception.

The same account holds good of every perceptive judgment; when I see a white substance on a plate and judge that "it is bread" I affirm the reference, or general meaning which constitutes the symbolic idea "bread" in my mind, to be a real quality of the spot or point in present perception which I attempt to designate by the demonstrative "this." The act defines the given but indefinite real by affirmation of a quality, and affirms reality of the definite quality by attaching it to the previously undefined real. Reality is given for me *in* present sensuous perception, and *in* the immediate feeling of my own sentient existence that goes with it. (Pp. 76, 77.)

Again, he says that the general features of the judgment of perception are as follows:

There is a presence of a something in contact with our sensitive self, which, as being so in contact, has the character of reality; and there is the qualification of this reality by the reference to it of some meaning *such as can be* symbolized by a name (p. 77).

Our point of contact with reality, the place where reality gets into the thought-process, is, according to this view, to be found in the simplest, most indefinite type of judgment of perception. We meet with reality in the mere undefined "this" of primitive experience. But each such elementary judgment about an undefined "this" is an isolated bit of experience. Each "this" could give us only a detached bit of reality at best, and the further problem now confronts us of how we ever succeed in piecing our detached bits of

reality together to form a real world. Bosanquet's explanation is, in his words, this:

> The real world, as a definite organized system, is *for me* an extension of this present sensation and self-feeling by means of judgment, and it is the essence of judgment to effect and sustain such an extension (p. 77).

Again he says:

> The subject in every judgment of Perception is some given spot or point in sensuous contact with the percipient self. But, as all reality is continuous, the subject is not *merely* this given spot or point. It is impossible to confine the real world within this or that presentation. Every definition or qualification of a point in present perception is affirmed of the real world which is continuous with present perception. The ultimate subject of the perceptive judgment is the real world as a whole, and it is of this that, in judging, we affirm the qualities or characteristics. (P. 78.)

The problem is the same as that with which Bradley struggles in his treatment of the subject of the judgment, and the solution is also the same. Bradley's treatment of the point is perhaps somewhat more explicit. Like Bosanquet, he starts with the proposition that the subject of the judgment must be reality itself and not an idea, because, if it were the latter, judgment could never give us anything but a union of ideas, and a union of ideas remains forever universal and hypothetical. It can never acquire the uniqueness, the singularity, which is necessary to make it refer to the real. Uniqueness can be found only in our contact with the real. But just where does our contact with the real occur? Bradley recognizes the fact that it cannot be the *content* — even in the case of a simple sensation — which gives us reality. The content of a sensation is a thing which is in my consciousness, and which has the form which it presents because it is in my consciousness. Reality is precisely something which is not itself sensation, and cannot be in my consciousness. If I say, "This is white," the

"this" has a content which is a sensation of whiteness. But the sensation of whiteness is not reality. The experience brings with it an assurance of reality, not because its content is the real, but because it is "my direct encounter in sensible presentation with the real world."[1] To make the matter clearer, Bradley draws a distinction between the *this* and the *thisness*. In every experience, however simple, there is a content — a "thisness" — which is not itself unique. Considered merely as content, it is applicable to an indefinite number of existences; in other words, it is an idea. But there is also in every experience a "this" which is unique, but which is not a content. It is a mere sign of existence which gives the experience uniqueness, but nothing else. The "thisness" falls on the side of the content, and the "this" on the side of existence. It is exactly the distinction which Bosanquet has in mind in the passages quoted in which he tells us that "reality is given for me *in* present sensuous perception, and *in* the immediate feeling of my own sentient existence which goes with it;" and again when he says: "There is a presence of a something in contact with our sensitive self, which, as being so in contact, has the character of reality." The same point is made somewhat more explicitly in his introduction when he says that the individual's present perception is not, indeed, reality as such, but is his present point of contact with reality as such (p. 3).

But has this distinction between the content of an experience and its existence solved the problem of how we *know* reality? When Bosanquet talks of knowing reality, he means possessing ideas which are an accurate reproduction of reality. It is still far from clear how, according to his own account, we could ever have any assurance that our ideas do represent reality accurately, if we can nowhere find

[1] F. H. BRADLEY, *Principles of Logic*, p. 64.

a point at which the content of an experience can be held to give us reality. The case is still worse when we go beyond the problem of how any particular bit of reality can be known, and ask ourselves how reality as a whole can be known. The explanation offered by both Bradley and Bosanquet is that by means of judgment we extend the bit of reality of whose existence we get a glimpse through a peep-hole in the curtain of sensuous perception, and thus build up the organized system of reality. In a passage previously quoted, Bosanquet tells us that all reality is continuous, and therefore the real subject of a judgment cannot be the mere spot or point which is given in sensuous perception, but must be the real world as a whole. But how does he know that reality is continuous, and that the real world is an organized system? Our only knowledge of reality comes through judgment, and judgment brings us into contact with reality only at isolated points. When he tells us that reality is a continuous whole, he does so on the basis of a metaphysical presupposition which is not justifiable by his theory of the judgment. The only statement about reality which could be maintained on the basis of his theory is that some sort of a reality exists, but the theory furnishes equal justification for the assurance that this reality is of such a nature that we can never know anything more about it than the bare fact of its existence. Moreover, the bare fact of the existence of reality comes to us merely in the form of a feeling of our own sentient existence which goes with sense-perception. But the mere assurance that somewhere behind the curtain of sensuous perception reality exists (even if this could go unchallenged), accompanied by the certainty that we can never by any possibility know anything more about it, is practically equivalent to the denial of the possibility of knowledge.[1]

[1] The difficulty, of course, is not a merely formal one, much less a verbal one. Instinctively we grant to Bosanquet his statement that reality is a continuous whole; we feel it almost captious to question his right to it. But why? Because

Although the denial of the possibility of knowledge seems to be the logical outcome of the premises, it is not the conclusion reached by Bosanquet. At the outset of his treatise, Bosanquet propounds the fundamental question we have been considering in these words: "How does the analysis of knowledge as a systematic function, or system of functions, explain that relationship in which truth appears to consist, between the human intelligence on the one hand, and fact or reality on the other?" His answer is: "To this difficulty there is only one reply. If the object-matter of reality lay genuinely outside the system of thought, not only our analysis, but thought itself, would be unable to lay hold of reality." (Pp. 2, 3.) The statement is an explicit recognition of the impossibility of bridging the chasm between a reality outside the content of knowledge and a known real world. It brings before us the dilemma contained in Bosanquet's treatment of the subject of the judgment. On the one hand the subject of the judgment must be outside the realm of my thoughts. If it were not, judgment would merely establish a relation between my ideas and would give me no knowledge of the real world. On the other hand, the subject of the judgment must be within the realm of my thoughts. If it were not, I could never assert anything of it; could never judge, or know it. The stress he lays on the first horn of the dilemma has been shown. It remains to show his recognition of the second horn, and to find out whether or not he discovers any real reconciliation between the two.

Bosanquet sums up the section of the introduction on knowledge and its content, truth, with the following paragraph:

the *content of judgment* is continuous; judgment is always engaged with the determination of a related totality. But if all content is ideal, and judgment is just the application of this content to reality in virtue of an isolated contact, surely it begs the entire question to say that reality apart from the content applied is continuous, and then to use this assertion to justify the objective validity of the judgment — its element of permanent truth.

The real world for every individual is thus emphatically *his* world; an extension and determination of his present perception, which perception is to him not indeed reality as such, but his point of contact with reality as such. Thus in the enquiry which will have to be undertaken as to the logical subject of the judgment, we shall find that the subject, however it may shift, contract, and expand, is always in the last resort some greater or smaller element of this determinate reality, which the individual has constructed by identifying significant ideas with that world of which he has assurance through his own perceptive experience. In analyzing common judgment it is ultimately one to say that *I judge* and that *the real world for me, my real world, extends itself*, or maintains its organized extension. This is the ultimate connection by which the distinction of subject and predication is involved in the act of affirmation or enunciation which is the differentia of judgment. (Pp. 3, 4).

Here the subject of the judgment appears as an element of a reality *which the individual has constructed* by identifying significant ideas with that world of which he has assurance through his own perceptive experience. But the very point with reference to the subject of the judgment previously emphasized is that it is not and cannot be something which the individual has constructed. The subject of the judgment must be reality, and reality does not consist of ideas, even if it be determined by them. It does not mend matters to explain that the individual has constructed his real world by identifying significant ideas with that world of which he has assurance through his own perceptive experiences, because, as we have seen, "the individual's perceptive experiences" either turn out to be merely similar mental constructions made at a prior time, so that nothing is gained by attaching to them, or else they mean once more the mere shock of contact which is supposed to give assurance that some sort of reality exists, but which gives no assurance of what it is. That and what, this and thisness still remain detached. When he talks of *the real world for any individual* we are left entirely in the dark as to what the relation between *the*

real world as it is for any individual and *the real world as it is for itself* may be, or how the individual is to gain any assurance that *the real world as it is for him* represents *the real world as it is for itself.*

Another attempt at a reconciliation of these opposing views leaves us no better satisfied. The passage is as follows:

> The real world, as a definite organized system, is *for me* an extension of this present sensation and self-feeling by means of judgment, and it is the essence of judgment to effect and sustain such an extension. It makes no essential difference whether the ideas whose content is pronounced to be an attribute of reality appear to fall within what is given in perception, or not. We shall find hereafter that it is vain to attempt to lay down boundaries between the given and its extension. The moment we try to do this we are on the wrong track. The given and its extension differ not absolutely but relatively; they are continuous with each other, and the metaphor by which we speak of an extension conceals from us that the so-called "given" is no less artificial than that by which it is extended. It is the character and quality of being directly in contact with sense-perception, not any fixed datum of content, that forms the constantly shifting center of the individual's real world, and spreads from that center over every extension which the system of reality receives from judgment. (P. 77.)

In this passage by the "given" he evidently means the content of sensory experience, the thisness, the what. It is, as he says, of the same stuff as that by which it is extended. Both the given and that by which it is extended are artificial in the sense of not being *real* according to Bosanquet's interpretation of reality; they are ideas. But if all this is admitted, what becomes of the possibility of knowledge? Bosanquet undertakes to rescue it by assuring us again that it is the character and quality of being directly in contact with sense-perception, not any fixed datum of content, that forms the center of the individual's real world and gives the stamp of reality to his otherwise ideal extension of this center. Here again we find ourselves with no evidence

that the *content* of our knowledge bears any relation to reality. We have merely the feeling of vividness attached to sensory experience which seems to bring us the certainty that there is some sort of a reality behind it, but this is not to give assurance that our ideal content even belongs rightfully to that against which we have bumped, much less of *how* it belongs—and only this deserves the title "knowledge."

In the chapter on "Quality and Comparison," in which he takes up the more detailed treatment of the simplest types of judgment of perception, he comes back to the same contradiction, and again attempts to explain how both horns of his dilemma must be true. The passage is this :

> The Reality to which we ascribe the predicate is undoubtedly self-existent ; it is not *merely* in my mind or in my act of judgment ; if it were, the judgment would only be a game with my ideas. It is well to make this clear in the case before us, for in the later forms of the judgment it will be much disguised. Still the reality which attracts my concentrated attention is also within my act of judgment ; it is not even the whole reality present to my perception ; still less of course the whole self-existent Reality which I dimly presuppose. The immediate subject of the judgment is a mere aspect, too indefinite to be described by explicit ideas except in as far as the qualitative predication imposes a first specification upon it. *This* Reality *is* in my judgment ; it is the point at which the actual world impinges upon my consciousness as real, and it is only by judging with reference to this point that I can refer the ideal content before my mind to the whole of reality which I at once believe to exist, and am attempting to construct. The Subject is both in and out of the Judgment, as Reality is both in and out of my consciousness. (Pp. 113, 114.)

The conclusion he reaches is a mere restatement of the difficulty. The problem he is trying to solve is how the subject *can* be both in and out of the judgment, and how the subject without is related to the subject within. The mere assertion that it is so does not help us to understand it.

His procedure seems like taking advantage of two meanings of sense-perception, its conscious quality and its brute abrupt immediacy, and then utilizing this ambiguity to solve a problem which grows out of the conception of judgment as a reference of idea to reality.

Turning from his treatment of the world of fact to his discussion of the world of idea, from the subject to the predicate, as it appears in his theory of the judgment we find again a paradox which must be recognized and cannot be obviated. An idea is essentially a meaning. It is not a particular existence whose essence is uniqueness as is the case with the subject of the judgment, but is a meaning whose importance is that it may apply to an indefinite number of unique existences. Its characteristic is universality. And yet an idea regarded as a psychical existence, an idea as a content in my mind, is just as particular and unique as any other existence. How, then, does it obtain its characteristic of universality? Bosanquet's answer is that it must be universal by means of a reference to something other than itself. Its meaning resides, not in its existence as a psychical image, but in its reference to something beyond itself. Now, any idea that is affirmed is referred to reality, but do ideas exist which are not being affirmed? If so, their reference cannot be to reality. Bosanquet discusses the question in the second section of his introduction as follows:

> It is not easy to deny that there is a world of ideas or of meanings, which simply consists in that identical reference of symbols by which mutual understanding between rational beings is made possible. A *mere* suggestion, a *mere* question, a *mere* negation, seem all of them to imply that we sometimes *entertain* ideas without affirming them of reality, and therefore without affirming their reference to be a reference to something real or their meaning to be fact. We may be puzzled indeed to say what an idea can mean, or to what it can refer, if it does not mean or refer to some-

thing real — to some element in the fabric continuously sustained by the judgment which is our consciousness. On the other hand, it would be shirking a difficulty to neglect the consideration that an idea, while denied of reality, may nevertheless, or even must, possess an identical and so intelligible reference — a symbolic value — for the rational beings who deny it. A reference, it may be argued, must be a reference to something. But it seems as if in this case the something were the fact of reference itself, the rational convention between intelligent beings, or rather the world which has existence, whether for one rational being or for many, merely as contained in and sustained by such intellectual reference.

I only adduce these considerations in order to explain that transitional conception of an objective world or world of meanings, distinct from the real world or world of facts, with which it is impossible wholly to dispense in an account of thought starting from the individual subject. The paradox is that the real world or world of fact thus seems for us to fall within and be included in the objective world or world of meanings, as if all that is fact were meaning, but not every meaning were fact. This results in the contradiction that something is objective, which is not real. (Pp. 4, 5.)

In the seventh section of the introduction Bosanquet explains his meaning further by what the reader is privileged to regard as a flight of the imagination — a mere simile — which he thinks may, nevertheless, make the matter clearer.

We might try to think that the world, *as known to each of us*, is constructed and sustained by his individual consciousness; and that every other individual also frames for himself, and sustains by the action of his intelligence, the world in which he in particular lives and moves. Of course such a construction is to be taken as a reconstruction, a construction by way of knowledge only; but for our present purpose this is indifferent. Thus we might think of the ideas and objects of our private world rather as corresponding to than as from the beginning identical with those which our fellow-men are occupied in constructing each within his own sphere of consciousness. And the same would be true even of the objects and

contents within our own world, in as far as an act or effort would be required to maintain them, of the same kind with that which was originally required to construct them. . . . . Thus the paradox of reference would become clearer. We should understand that we refer to a correspondence by means of a content. We should soften down the contradiction of saying that a name to meet which we have and can get nothing but an idea, nevertheless does not stand for that idea but for something else. We should be able to say that the name stands for those elements in the idea which correspond in all our separate worlds, and in our own world of yesterday and of today, considered as so corresponding. (Pp. 45, 46.)

According to this view, the idea obtains the universality which constitutes it an idea by a sort of process of elimination. It is like a composite photograph. It selects only the common elements in a large number of particular existences, and thus succeeds in representing, or referring to, all the particular existences which have gone to make it up. But when we come to consider the bearing which this view of universality, or generalized significance, has on our estimate of the knowledge-process, we feel that it has not solved the problem for us. In the first place, the idea *in its existence* is just as particular when regarded as made up of the common elements of many ideas as is any of the ideas whose elements are taken. A composite photograph is just as much a single photograph as any one of the photographs which are taken to compose it. The chasm between the particularity of the psychical image and the universality of its meaning is not bridged by regarding the content of the image as made up by eliminating unlike elements in a number of images. The stuff with which thought has to work is still nothing more than a particular psychical image, and the problem of what gives it its logical value as a general significance is still unsolved. Nor does it seem possible to find anything in the *existence* of the image which could account for its reference to something outside

of itself. The *fact* of reference itself becomes an ultimate mystery.[1]

But even waiving this difficulty, the judgment must still appear truncated, if it really totally disregard a part of its content — *i. e.*, the particular existence of the image as part of the judging consciousness. The theory holds that the particular existence of the image has no logical value. It is only its meaning, or general reference, which has logical value. But the image *qua* image is just as real as that to which it is supposed to refer. If the judgment really does ignore its existence, then it ignores a portion of the reality it attempts to represent, and stands self-confessed as a failure.[2] At still another point, ideas, as Bosanquet represents them, prove to be unsatisfactory tools to use in the work of building up reality. In Bosanquet's words: "The meaning tyrannizes over the psychical image in another respect. Besides crushing out of sight its particular and exclusive existence, it also crushes out part of its content" (p. 74). The idea, as we use it, is not, as to content, a complete or accurate representation of anything real. To take Bosanquet's illustration:

Some one speaks to me of the Ægean sea, which I have never seen. He tells me that it is a deep blue sea under a cloudless sky, studded with rocky islands. The meanings of these words are a problem set to my thought. I have to meet him in the world of objective references, which as intelligent beings we have in common. How I do this is my own affair, and the precise images at my command will vary from day to day, and from minute to minute. It sounds simple to say that I combine my recollections of sea and sky at Torbay with those of the island-studded waters of

[1] There is good reason for believing that Mr. Bosanquet escapes, in his own mind, the difficulty by the term "correspondence." "The name stands for these elements in the idea which *correspond* in the separate worlds;" we may even be accused of injustice in confusing this correspondence with bare identity of existence. But if one idea corresponds to another in the sense of referring to it, what is this but the fact to be explained—how an existence can refer beyond itself?

[2] This conclusion is clearly recognized by BRADLEY, *Appearance and Reality*, chap. 4.

Orkney or the Hebrides. Even so, there is much to adjust and to neglect; the red cliffs of Torbay, and the cloudy skies of the north. But then again, my recollections are already themselves symbolic ideas; the reference to Torbay or the Hebrides is itself a problem set to thought, and puts me upon the selection of index-elements in fugitive images that are never twice the same. I have *first* to symbolize the color of Torbay, using for the purpose any blue that I can call to mind, and fixing, correcting, subtracting from, the color so recalled, till I reduce it to a mere index quality; and *then* I have to deal in the same way with the meaning or significant idea so obtained, clipping and adjusting the qualities of Torbay till it seems to serve as a symbol of the Ægean. (Pp. 74, 75.)

And by the time all this is performed what sort of a representation of reality is the idea? Evidently a very poor and meager and fragmentary one.

It is so poor and fragmentary, that it cannot itself be that which is affirmed of reality. It must be some other fuller existence to be found in the world of meanings which is affirmed. And yet how the meager content of the idea succeeds in referring to the world of meanings, and acting as the instrument for referring a meaning to reality, is not at all clear. It seems impossible to explain reference intelligibly by the concept of a *correspondence* of contents.

The fundamental difficulty in the interpretation of the predicate is the same one that we encountered in the interpretation of the subject. If the predicate is to be affirmed of reality (and if it be not, it has no logical value), then it must, when affirmed, be in some sense an accurate representation of reality. But the predicate is an idea, and, moreover, an idea which is, both in its existence and in its meaning palpably the outcome of transformations wrought upon given sensory contents by the individual consciousness. Since the one point of contact with reality is in sensory experience, the more simple sensory experiences are reacted upon and worked over, the farther they recede from reality. The idea

seems, therefore, in its very essence, a thing which never can be affirmed of reality. As image it is itself a reality, but not affirmed; as meaning it is that reality (the image) manipulated for individual ends. Why suppose that by distorting reality we get it in shape to affirm *of* reality? Moreover, the farther an idea is removed from immediate sensory experience — in other words, the more abstract it becomes — the less is the possibility of affirming it of reality. The final outcome of this point of view, if we adhere rigorously to its logic is that the more thinking we do, the less we know about the real world. Bosanquet avoids this conclusion by a pure act of faith. If knowledge is to be rescued, we must believe that the work done by consciousness upon the bits of reality given in sensory experience really does succeed in building up a knowledge of reality for us. As Bosanquet puts it: "The presentation of Reality, qualified by an ideal content, is one aspect of Subject and Predication; and my individual percipient consciousness determining itself by a symbolic idea is the other. That the latter is identified with the former follows from the claim of conscious thought that its nature is to know."[1] (P. 83.)

To sum up the situation, Bosanquet starts out with the assumption that by knowledge we must mean knowledge of a world entirely independent of our ideas. If we fail to make this assumption, knowledge becomes merely a relation between ideas. But its whole importance seems to us to rest on the conviction that it does give us knowledge of a world which is what it is quite independently of our ideas about it, and cannot in any sense be modified by what we think about it. What knowledge does is to give us a copy or representation of the real world, whose value depends on the accuracy

[1] It would be suggestive to inquire in what sense conscious thought claims to know. Is it a general claim which thought *qua* thought puts forth, or is it the claim of the content of some particular thought? The former, of course, is a mere pious aspiration having no reference to specific validity or truth; the latter is precisely the problem under consideration.

of the representation. And yet when we examine any individual knowing consciousness, the subject which appears within the judgment is never some portion of the world which exists outside of the knowing consciousness, but always some portion of the world which exists within the knowing consciousness, and which is constituted by the knowledge process. The predicate which is affirmed of reality is constantly found to derive its meaning, its generalized significance, not from its correspondence with, or reference to, the real world outside of the knowing consciousness, but from reference to a world of meanings, which consists in a sort of convention among rational beings—a world whose existence is distinctly within the knowing consciousness and not outside of it.[1] Between the real world, as Bosanquet conceives it, and the world of knowledge, we find inserted on the side of the subject, the world *as known to each of us*, and on the side of the predicate, the *objective world of meanings*. Neither of these is the real world. Both of them are ideal, *i. e.*, are constructions of the individual consciousness. We nowhere find any satisfactory explanation of how these ideal worlds are related to the real world. There is merely the assertion that we must believe that they represent the real world in order that we may believe that knowledge exists. But the fact remains that whenever we try to analyze and explain any particular judgment, what we find ourselves dealing with is always the world as it exists to us as subject, and the objective world of meanings as predicate. If we stop here, then knowledge turns out to be just what Bosanquet asserted at the outset that it was *not*, *i. e.*, a relation between ideas. When we demand a justification for going farther than this, we find none except the claim of conscious thought that its nature is to know—a claim whose justice we have

[1] Bosanquet would seem to have followed Lotze in this insertion of a world of "meanings" intermediate between the individual idea as such and the real object as such. See the criticism already passed, pp. 93-5.

no possible means of testing, and which would not, even if admitted, be of the slightest value in deciding which *particular* judgment is true and which false.

Bosanquet's development of his subject has proved to be throughout the necessary logical outcome of the presuppositions with reference to reality from which he starts. The fundamental difficulty of erecting a theory of the knowledge-process upon such a basis is recognized by him at the start in a passage already quoted: "If the object-matter of reality lay genuinely outside the system of thought, not only our analysis, but thought itself, would be unable to lay hold of reality" (p. 2). But, in spite of this assertion, his fundamental conception of reality remains that of a system which does lie outside the thought-process. His theory is an attempt to reconcile the essentially irreconcilable views that reality is outside of the thought-process, and that it is inside of the thought-process, and he succeeds only by calling upon our faith that so it is.

If it be true, as it seems to him to be, that we are compelled to adhere to both of these views of reality, then surely there is no other outcome. It means, however, that we finally resign all hope of *knowing* reality. We may *have faith* in its existence, but we have no way of deciding what particular judgment has reality in it as it should have it, and what as it should not. All stand (and fall) on the same basis. But does not Bosanquet himself point out a pathway which, if followed farther, would reach a more satisfactory view of the realm of knowledge? He has shown us that the only sort of reality *we know*, or can know, is the reality which appears within our judgment-process—the reality as known to us. Would it not be possible to drop the presupposed reality outside of the judgment-process (with which judgment is endeavoring to make connections) and content ourselves with the sort of reality which appears within the

judgment-process? In other words, may there not be a satisfactory view of reality which frankly recognizes its organic relation to the knowledge-process, without at the same time destroying its value as reality? Is it possible to admit that reality is in a sense constituted in the judgment without making it at the same time the figment of the individual imagination—"a game with ideas"?

Let us assume for the moment that the real difficulty with Mr. Bosanquet's conception, the error that keeps him traveling in his hopeless circles, is the notion that truth is a matter of reference of ideas as such to reality as such, leading us to oscillate between the alternatives that either all ideas have such reference, and so are true, constitute knowledge; or else none have such reference, and so are false; or else are mere ideas to which neither truth nor falsity can be attributed. Let us ask if truth is not rather some *specific* relation within experience, something which characterizes one idea rather than another, so that our problem is not how an idea can refer to a reality beyond itself, but what are the marks by which we discriminate a true reference from a false one. Then let us ask for the criterion used in daily life and in science by which to test reality.

If we ask the philosophically unsophisticated individual why he believes that his house still exists when he is away from it and has no immediate evidence of the fact, he will tell you it is because he has found that he can go back to it time and again and see it and walk into it. It never fails him when he acts upon the assumption that it is there. He would never tell you that he believed in its existence when he was not experiencing it because his mental picture of his house stood for and represented accurately an object in the real world which was nevertheless of a different order of existence from his mental picture. When you ask the physicist why he believes that the laws of motion are true, he will tell you

that it is because he finds that bodies always do behave according to them. He can predict just what a body will do under given circumstances. He is never disappointed however long he takes it for granted that the laws of motion are true and that bodies behave according to them. The only thing that could make him question their truth would be to find some body which did not prove to behave in accordance with them. The criterion is the same in both cases. It is the practical criterion of what as a matter of fact will work. That which can safely be taken for granted as a basis for further action is regarded as real and true. It remains real so long, and only so long, as it continues to fulfil this condition. As soon as it ceases to do so, it ceases to be regarded as real. When a man finds that he can no longer obtain the accustomed experience of seeing and entering his house, he ceases to regard it as real. It has burned down, or been pulled down. When a physicist finds that a body does not, as a matter of fact, behave as a given law leads him to expect it would behave, he ceases to regard the law as *true*.

The contrast between the naïve view of the criterion of reality and the one we have just been discussing may be brought out by considering how we should have to interpret from each standpoint the constant succession of facts in the history of science which have ceased to be facts. For illustration take the former fact that the earth is flat. It ceased to be a fact, says the theory we have been reviewing, because further thought-constructions of the real world convinced us that there is no reality which the idea "flat-world" represents. The idea "round-world" alone reproduces reality. It ceased to be a fact, says the naïve view, because it ceased to be a safe guide for action. Men found they could sail around the world. Correspondence in one case is pictorial, and its existence or non-existence can,

as we have seen, never be ascertained. In the other, correspondence is response, adjustment, the co-meeting of specific conditions in further constituting of experience.

In actual life, therefore, the criterion of reality which we use is a practical one. The test of reality does not consist in ascertaining the relationship between an idea and an x which is not idea, but in ascertaining what experience can be taken for granted as a safe basis for securing other experiences. The evident advantage of the latter view, leaving aside for the moment the question of its adequacy in other respects, is that it avoids the fundamental skepticism at once suggested by the former. How can we ever be sure that the fact which we have discovered will stand the test of further thought-constructions? Perhaps it comes no nearer to reality than the discarded one. Obviously we never *can* be sure that any particular content of thought represents reality so accurately and perfectly that it will never be subject to revision. If, however, the test of reality is the *adequacy* of a given content of consciousness as a stimulus to action, as a mode of control, we have an applicable standard. A given content of consciousness is real—is a fact—so long as the act resulting from it is adequate in adaptation to other contents. It ceases to be real as soon as the act it stimulates proves to be inadequate.

The view which places the ultimate test of facts, not in any relationship of contents or existences, but in the practical outcome of thought, is the one which seems to follow necessarily from a thoroughgoing conception of the judgment as a function—an act. Our fundamental biological conception of the activities of living organisms is that acts exist for the sake of their results. Acts are always stimulated by some definite set of conditions, and their value is always tested by the adequacy with which they meet this set of conditions. The judgment is no exception to the rule. It

is always an act stimulated by some set of conditions which needs readjusting. Its outcome is a readjustment whose value is and can be tested only by its adequacy. It is accordingly entirely in line with our reigning biological conceptions to expect to find the ultimate criterion of truth and reality in the practical outcome of thought, and to seek for an understanding of the nature of the "real" and of the "ideal" within the total activity of judgment.

One difficulty besets us at the outset of such an investigation—that of being sure that we have a genuine judgment under examination. A large portion of the so-called judgments considered by logicians, even by those who emphasize the truth that a judgment is an *act*, are really not judgments at all, but contents of thought which are the outcome of judgments—what might be called dead judgments, instead of live judgments. When we analyze a real act of judgment, as it occurs in a living process of thought, we find given elements which are always present. There is always a certain situation which demands a reaction. The situation is always in part determined and taken for granted, and in part questioned. It is determined in so far as it is a definite situation of some sort; it is undetermined in so far as it furnishes an inadequate basis for further action and therefore comes to consciousness as a problem. For example, take one of the judgments Bosanquet uses. "This is bread." We have first to inquire when such a judgment actually occurs in the living process of thought. A man does not make such a judgment in the course of his thinking unless there is some instigation to do so. Perhaps he is in doubt as to whether the white object he perceives is bread or cake. He wants some bread, but does not want cake. A closer inspection convinces him that it is bread, and the finished judgment is formulated in the proposition: "This is bread." What is the test of the reality of the bread, and the truth of

the judgment? Evidently the act based on it. He eats the bread. If it tastes like bread and affects him like bread, then the bread was real and the judgment true. If, on the other hand, it does not taste like bread, or if it makes him violently ill, then the "bread" was not real and the judgment was false. In either case, the "this"—the experience to be interpreted—is unquestioned. The man does not question the fact that he has a perception of a white object. So much is taken for granted and is unquestioned within that judgment. But there is another part of the experience which is questioned, and which remains tentative up to the conclusion of the act of judgment; that is the doubt as to whether the perceived white object is bread or something else. Every live judgment, every judgment as it normally occurs in the vital process of thought, must have these phases. It is only when a judgment is taken out of its context and reduced to a mere memorandum of past judgments that it fails to reveal such parts. The man may, of course, go farther back. He may wonder whether this is really white or not. But he falls back then on something else which he takes unquestioningly —a "this" experience of some sort or other.

So far we have considered the practical criterion of reality merely as the one which is actually operative in everyday life, and as the one suggested by our biological theory of the functions of living organisms. It also offers a suggestion for the modified view of the nature of reality for which we are in search. Our previous discussion brought out incidentally a contradiction in the traditional theory of the nature of reality which it will be worth while to consider further. In dealing with the subject of the judgment, reality seemed to be made synonymous with fact. In this sense fact, or the real, was set off against the ideal. Knowledge was viewed as the correspondence between real and ideal. When we came to deal with the ideal itself—with

the predicate of the judgment — there appeared in it an element of fact or reality which proved a serious stumbling-block for the theory. As image in my mind, the idea is just as real as the so-called facts; but this sort of reality according to the theory in question is neither the reality about which we are judging nor a real quality of it. Both Bradley and Bosanquet are forced to admit that the judgment ignores it, and is in so far by nature inadequate to its appointed task of knowing reality.

The suggestion which the situation offers for a new theory is that the view of reality has been too narrow. Reality must evidently be a broad enough term to cover both fact and idea. If so, the reality must be nothing more nor less than the total process of experience with its continual opposition of fact and idea, and their continual resolution through activity. That which previous theory has been calling the real is not the total reality, but merely one aspect of it. The problem of relation of fact and idea is thus the problem of the relation of one form of reality to another, and so a determinate soluble one, not a *merely* metaphysical or general one. Granting this, does it still remain true that reality in the narrower sense, reality as fact, can be regarded as a different order of existence from the ideal, and set over against the thought-process? Evidently not. Fact and idea become merely two aspects of a total reality. The way in which fact and idea are distinguished has already been suggested by the practical and biological criterion of fact, or reality in the narrower sense. From this point of view, fact is not a different order of existence from idea, but is merely a part of the total process of experience which functions in a given way. It is merely that part of experience which is taken as given, and which serves as a stimulus to action. Thus the essential nature of fact, or reality in the popular sense, falls not at all on the side of its content, but

on the side of its function. Similarly the ideal is merely that part of the total experience which is taken as tentative. There is no problem as to how either of them is related to reality. In this relationship they *are* reality. That which previous theories had been calling the whole of reality now appears as merely one aspect of it — the fact aspect — artificially isolated from the rest.

When we translate this view of the nature of reality into terms of a theory of the judgment, we find that we can agree with Bosanquet in his definition of a judgment. It is an act, and an act which refers an ideal content to reality. The judgment must be an act, because it is essentially an adaptation — a reaction toward a given situation. The subject of the judgment is that part of the content of experience which represents the situation to be reacted to. It is that which is taken for granted as given in each case. Now this is, as we have seen, reality — in the narrower sense of that term. What Bosanquet has been calling reality now appears merely as the subject of the judgment taken out of its normal function and considered as an isolated thing. It is an artificial abstraction. It is accordingly true, as Bosanquet insists, that the subject of the judgment must always be reality — both in his sense of the term and in ours. This reality is not real, however, by virtue of its independence from the judgment, but by virtue of its function within the judgment. His fundamental problem with reference to the subject of the judgment is disposed of from this point of view. The subject is wholly within the judgment, not in any sense outside of it; but it is at the same time true that the subject of the judgment is reality. The fact that the subjects of all judgments — even those of the most elementary type — bear evident marks of the work done by thought upon them, ceases to be a problem. The subject is essentially a thing constituted by the doubt-inquiry process, and func-

tioning within it. The necessity for an intermediate *real world as it is to me* between the real world and the knowing process disappears, because the *real world as it is to me* is the only real world of which the judgment can take account. There is no longer any divorce between the content of the subject and its existence. Reality in his sense of the term —reality as fact— does not fall on the side of *existence* in distinction from content, but on the side of *function* in distinction from content.

The predicate of the judgment is that part of the total experience which is taken as doubtful, or tentative. As we have seen, every act of adaptation involves a definite situation to be reacted to (subject) and an indefinite or tentative material with which to react (predicate). We have pointed out that a situation which demands a judgment never appears in consciousness as mere questioned or questionable situation.[1] There is always present, as soon as the doubt arises, some sort of tentative solution. This is the predicate or idea. Just as the fact, or real in the narrower sense, is that which is taken as given in the situation, so the ideal is that which is taken as tentative. Its ideality does not consist in its reference to another order of existence, the objective world of meanings, but in its function within the judgment, the estimate of the whole situation as leading up to the adequate act. Just as we no longer have any need for the mediation of the *real world as known to me* between subject and reality, so we no longer need the *objective world of meanings* to bridge the chasm between the predicate and reality. The difficulty of understanding how ideas can be used to build up facts disappears when we regard fact and idea, not as different orders of existence, but as contents marking different phases of a total function.

[1] Or, the situation as questioned is itself a fact, and a perfectly determinate (though not determined) one. See pp. 38, 50.

Ideas, as Bosanquet represented them, proved to be extremely unsatisfactory tools to use in building up a knowledge of reality. In the first place, their value as instruments of thought depends upon their universality. We have already reviewed Bosanquet's difficulties in attempting to explain the universality of ideas. The universality of an idea cannot reside in its mere existence as image. Its existence is purely particular. Its universality must reside in its reference to something outside of itself. But no explanation of how the particular existence — image — could refer to another and fuller content of a different order of existence could be discovered. The fact of reference remained an ultimate mystery. From the new point of view the image gains its universality through its organizing function. It represents an organized habit which may be brought to bear upon the present situation, and which serves, by directing action, to organize and unify experience as a whole. It is only as function that the concept of reference can be made intelligible.

Of course, considered as content, the idea is just as particular from this point of view as from any other. We still have to discuss the question as to whether or not the particularity of the idea has a logical value. The fact that it had none in Bosanquet's theory sets a limit to the validity of thought. But if the real test of the validity of a judgment is the act in which it issues, then the existential aspect of the idea must have logical value. The existential aspect of the idea is the "my" side of it. It is as my personal experience that it exists. But it is only as my idea that it has any impulsive power, or can issue in action. Far from being ignored, therefore, the existential aspect is essential to the logical, the determinative, value of an idea.

Ideas, according to the representational theory of knowledge, proved to be a poor medium for knowing reality in still another respect. They are in their very nature contents

that have been reduced from the fulness of experience to mere index-signs. Even though their reference to a fuller content in the objective world of meanings presented no problem, still this objective world of meanings is far removed from reality. And yet, in order to know, we must be able to affirm ideas of reality. On the functional theory of ideas, their value does not rest at all upon their representational nature. They are not taken either in their existence or in their meaning as representations of any other content. They are taken as contents which mark a given function, and their value is determined entirely by the adequacy of the function of which they are the conscious expression. Their content may be as meager as you please. It may have been obtained by a long process of reducing and transforming sensory experience, but if it serve to enable its possessor to meet the situation which called it up with the appropriate act, then it has truth and value in the fullest sense. The reduction of the idea to a mere index-sign presents no problem when we realize that it is the tool of a given function, not the sign for a different and fuller content. The idea thus becomes a commendable economy in the thought-process, rather than a reprehensible departure from reality.

We have already upon general considerations criticised the point of view which holds that ideality consists in reference to another content. In arguing that this reference cannot be primarily to reality itself, but rather to an intermediate world of meanings, Bosanquet cites the question and the negative judgment. In the question ideas are not affirmed of reality, and in negation they are definitely denied of reality, hence their reference cannot be to reality. It must therefore be to an objective world of meanings. It may be worth while to point out in passing that, from the functional point of view, the part played by ideas in the question and in negative judgment is the same that it is in affirmation.

We have brought out the fact that all judgment arises in a doubt. The earliest stage of judgment is accordingly a question. Whether the process stops at that point, or is carried on to an affirmation or negation, depends upon the particular conditions. The ideas which appear in questions present no other problem than those of affirmation. They are ideas, not by virtue of their reference to another content in the world of meanings, but by virtue of their function, *i. e.*, that of constituting that part of the total experience which is taken as doubtful, and hence as in process.

In order to make this point clear with reference to negative judgments, it will be necessary to consider the relation of negative and positive judgments somewhat more in detail. All judgment is in its earliest stages a question, but a question is never *mere* question. There are always present some suggestions of an answer, which make the process really a disjunctive judgment. A question might be defined as a disjunctive judgment in which one member of the disjunction is expressed and the others implied. If the process goes on to take the form of affirmation or negation, one of the suggested answers is selected. To follow out the illustration of the bread used above, the judgment arises in a doubt as to the nature of the white object perceived, but the doubt never takes the form of a blank question. It at once suggests certain possible solutions drawn from the mass of organized experience at the command of the person judging. At this stage the judgment is disjunctive. In the illustration it would probably take the form: "This is either bread or cake." The further course of the judgment rejects the cake alternative, and selects the bread, and the final outcome of the judgment is formulated in the proposition: "This is bread." But how did it happen that it did not take the form: "This is not cake"? That proposition is also involved in the outcome, and implied in the judgment made. The

answer is that the form taken by the final outcome depends entirely on the direction of interest of the person making the judgment. If his interest happened to lie in obtaining bread, then the outcome would naturally take the form: "This is bread," and his act would consist in eating it. If he happened to want cake, the natural form would be, "This is not cake," and his act would consist in refraining from eating. In other words, the question as to whether a judgment turns out to be negative or positive is a question of whether the stress of interest happens to fall on the selected or on the rejected portions of the original disjunction. Every determination of a subject through a predicate includes both. The selection of one or the other according to interest affects the final formulation of the process, but does not change the relations of its various phases. An idea in a negative judgment is just what it is in a positive judgment. In neither case is it constituted an idea by reference to some other content.

So far we have outlined Bosanquet's theory of the judgment; have noted the apparently insoluble problems inherent in his system, and have sketched a radically different theory which offered a possible solution for his difficulties. It now remains to develop the implications of the new theory further by comparing its application to some of the more important problems of logic with that of Bosanquet. In closing we shall have to inquire to what extent the new theory of the judgment with its metaphysical implications has proved more satisfactory than that of Bosanquet.

The special problems to be considered are (1) the relation of judgment to inference; (2) the parts of the judgment and their relationship; (3) the time element in the judgment; and (4) the way in which one judgment can be separated from another.

1. The discussion of the relation between judgment and inference comes up incidentally in Bosanquet's treatment of

the distinction between a judgment and a proposition (p. 79). The proposition, he says, is merely the enunciative sentence which represents the act of thought called judgment. With this distinction we should agree. In his discussion of the point, however, he criticises Hegel's doctrine that a judgment is distinguished from a proposition in that a judgment maintains itself against a doubt, while a proposition is a mere temporal affirmation, not implying the presence of a doubt. The ground of his criticism is that judgment must be regarded as operative before the existence of a conscious doubt, and that, while it is true, as Hegel suggests, that judgment and inference begin together, they both begin farther back than the point at which conscious doubt arises. Doubt marks the point at which inference becomes conscious of its ground. Now, it is undoubted that inferences in which the ground is implicit exist at an earlier stage of experience than those in which it is explicit. The former we usually call simple apprehension, and the latter judgment. What Bosanquet wishes to do is to make the term "judgment" cover both the implicit and the explicit activities. The question at once arises whether such a use of terms is accurate. There is certainly a wide difference between an inference which is conscious of its ground, and one which is not. It is conceivably a distinction of philosophic importance. To slur the difference by applying one name to both accomplishes nothing. It will be remembered that the presence of a conscious doubt is the criterion of judgment adopted in the standpoint from which we have been criticising Bosanquet's theory. We should accordingly make the term "inference" a wider one than the term "judgment." A judgment is an inference which is conscious of its ground. Since fact and idea have been represented as constituted in and through judgment, the question which at once suggests itself is: What, from such a standpoint, is the criterion of

fact and idea in the stage of experience previous to the appearance of judgment? The answer is that the question involves the psychological fallacy. There is no such distinction as fact and idea in experience previous to the appearance of judgment. The distinction between fact and idea arises only at the higher level of experience at which inference becomes conscious of its grounds. To ask what they were previous to that is to ask *what* they were before they *were*—a question which, of course, cannot be answered.

Our reason for not adopting Hegel's distinction between a judgment and a proposition would accordingly not be the same as Bosanquet's. The question has already been touched upon in the distinction between dead and live judgments. What Hegel calls a proposition is really nothing but a dead judgment. His illustration of a temporal affirmation is the sentence: "A carriage is passing the house." That sentence would be a judgment, he says, only in case there were some doubt as to whether or not a carriage was passing. But the question to be answered first is: When would such a "statement" occur in the course of our experience? It is impossible to conceive of any circumstances in which it would naturally occur, unless there were some doubt to be solved either of our own or of another. Perhaps one is expecting a friend, and does not know at first whether it is a carriage or a cart which is passing. Perhaps some one has been startled, and asks: "What is this noise?" What Hegel wishes to call a proposition is, accordingly, nothing but a judgment taken out of its setting.

2. In dealing with the traditional three parts of the judgment—subject, predicate, and copula—Bosanquet disposes of the copula at once, by dividing the judgment into subject and predication. But the two terms "subject" and "predication" are not co-ordinate. Subject, as he uses it, is a static term indicating a *content*. Predication is a dynamic

term indicating the act of predicating. It implies something which is predicated of something else, *i. e.*, two contents and the act of bringing them into relation. Now, if what we understand by the copula is the *act* of predicating abstracted from the content which is predicated of another content, then it does not dispose of the copula as a separate factor in judgment to include thing predicated and act of predicating under the single term "predication." The term "predication" might just as reasonably be made to absorb the subject as well, and would then appear—as it really is—synonymous with the term "judgment."

But Bosanquet's difficulties with the parts of the judgment are not disposed of even by the reduction to subject and predication. He goes on to say:

> It is plain that the judgment, however complex, is a single idea. The relations within it are not relations between ideas, but are themselves a part of the idea which is predicated. In other words, the subject must be outside the judgment in order that the content of the judgment may be predicated of it. If not, we fall back into "my idea of the earth goes round my idea of the sun," and this, as we have seen, is never the meaning of "The earth goes round the sun." What we want is, "The real world has in it as a fact what I mean by earth-going-round-sun." (P. 81.)

We have already pointed out the difficulties into which Bosanquet's presupposition as to the nature of reality plunges him. This is but another technical statement of the same problem. If the subject is really outside of judgment, then the entire *content* of the judgment must fall on the side of predicate, or idea. In the paragraphs that follow, Bosanquet brings out the point that the judgment must nevertheless contain the distinction of subject and predicate, since it is impossible to affirm without introducing a distinction into the *content* of the affirmation. Yet he considers this distinction to be *merely* a difference within an identity. It serves to mark off the grammatical subject

and predicate, but cannot be the essential distinction of subject and predicate. His solution of the puzzle is really the one for which we have been contending, *i. e.*, that "the real world is primarily and emphatically my world," but he still cannot be satisfied with that kind of a real world as ultimate. Behind the subject which presents my world he postulates a real world which is not my world, but which my world represents. It is the relation between this real world and the total content of a judgment which he considers the essential relation of judgment. This leaves him — as we have pointed out — as far as ever from a theory of the relation of thought to reality, and, moreover, with no criterion for the distinction of subject and predicate within the judgment. To say that it is a difference within an identity does not explain how, on a mere basis of content, such a difference is distinguished within an identity or how it assumes the importance it actually has. He vibrates between taking the whole intellectual content as predicate, the reality to be represented as subject (in which case the copula would be the "contact of sense-perception") and a distinction appearing without reasonable ground or bearing *within* the intellectual content. When subject and predicate are regarded as the contents in which phases of a function appear, this difficulty no longer exists.

3. In discussing the time relations within judgment (p. 85) Bosanquet first disposes of the view which holds that the subject is prior to the predicate in time, and is distinguished from the predicate by its priority. He emphasizes the fact that no content of consciousness can have the significance of a subject, except with reference to something already referred to it as predicate. But while it cannot be true that the parts of the judgment fall outside of one another in time, it is yet evident that in one sense at least the judgment is in time. To make this clear, Bosanquet draws a provisional distinc-

tion between the process of arriving at a judgment and the completed judgment. The process of arriving at a judgment is a process of passing from a subject with an indefinite provisional predicate — a sort of disjunctive judgment — to a subject with a defined predicate. This process is evidently in time, but it is as evidently not a transition from subject to predicate. It is, as he says, a modification, *pari passu*, of both subject and predicate. The same distinction, he thinks, must hold of the judgment when completed. But this throws us into a dilemma with reference to the time-factor in judgment. Time either is or is not an essential factor in judgment. If it is not essential, then how explain the evident fact that the judgment as an intellectual process does have duration? If it is essential, then how explain the fact that its parts do not fall outside one another in time? Bosanquet evidently regards the former problem as the easier of the two. His solution is that, while the judgment is an intellectual process in time, still this is a purely external aspect. The essential relation between subject and predicate is not in time, since they are coexistent; therefore time is not an essential element in judgment.

The first point at which we take issue with this treatment of time in relation to judgment is in the distinction between the process of arriving at the judgment and the completed judgment. Bosanquet himself defines judgment as an intellectual act by which an ideal content is referred to reality. Now, at what point does this act begin? Certainly at the point where an ideal content is first applying to reality, and this, as he points out, is at the beginning of the process which he describes as the process of arriving at a judgment. It is nothing to the point that at this stage the predicate is tentative, while later it becomes defined. His process of arriving at the judgment is exactly the process we have been describing as the early stages of any and every judg-

ment. When he talks about the judgment as completed, he has apparently shifted from the dynamic view of judgment implied in his definition to a static view. All he could mean by a completed judgment — in distinction to the total activity of arriving at a judgment — is the new content of which we find ourselves possessed when the total process of predication is complete. But this content is not a judgment at all. It is a new construction of reality which may serve either as subject or as predicate in future judgments.

Now, if we regard the judgment as the total activity by which an ideal content is referred to reality, then must we not regard time as an essential element? Bosanquet answers this question in the negative, because he believes that if time is an essential element, then the parts of the judgment must necessarily fall outside one another in time. But is this necessary? If the essence of judgment is the very modification, *pari passu*, of subject and predicate, then time must be an essential element in it, but it is not at all necessary that its elements should fall outside of one another in time. In other words, the dilemma which Bosanquet points out on p. 87 is not a genuine one. There is no difficulty involved in admitting that the judgment is a transition in time, and still holding that its *parts* do not fall outside *one another* in time. His own solution of the problem — *i.e.*, that, although judgment is an intellectual process in time, still time is not an essential feature of it, because subject and predicate are coexistent and judgment is a relation between them — involves a desertion of his dynamic view of judgment. He defines judgment, not as a relation between subject and predicate, but as an intellectual *act*.[1]

[1] Of course, the distinction between the process of arriving as temporal, and the essential relation of subject and predicate as eternal, harks back to the notion of judgment as the process by which "we" reproduce, or make real for ourselves, a reality already real within itself. And it involves just the same difficulties. The relation of subject and predicate — this simultaneous distinction and mutual reference — has meaning only in an act of adjustment, of attempt to control, within

4. The discussion of the time-element in judgment leads up to the next puzzle — that as to the way in which one judgment can be marked off from another in the total activity of thought. Bosanquet has pointed out that subject and predicate are both of them present at every stage of the judging process, and are undergoing progressive modification. If, therefore, we take a cross-section of the process at any point, we find both subject and predicate present; but a cross-section at one point would not reveal quite the same subject and predicate as the cross-section at another point. He comes to the conclusion that judgment breaks up into judgments as rhomboidal spar into rhomboids (p. 88). It is, accordingly, quite arbitrary to mark out any limits for a single judgment. The illustration he gives of the point is as follows:

Take such an every-day judgment of mixed perception and inference as, "He is coming down stairs and going into the street." It is the merest chance whether I break up the process thus, into two judgments as united by a mere conjunction, or, knowing the man's habits, say, when I hear him half way down stairs, "He is going out." In the latter case I summarize a more various set of observations and inferences in a single judgment; but the judgment is as truly single as each of the two which were before separated by a conjunction; for each of them was also a summary of a set of perceptions, which might, had I chosen, have been subdivided into distinct propositions expressing separate judgments; *e. g.*, "He has opened his door, and is going toward the staircase,

which we distribute our conditions. When the act is completed, the relation of subject and predicate, as subject and predicate, quite disappears. An eternal relation of the two is meaningless; we might as well talk of an eternal reaching for the same distant object by the same hand. In such conceptions, we have only grasped a momentary phase of a situation, isolated it, and set it up as an entity. Significant results would be reached by considering the "synthetic" character (in the Kantian sense) of judgment from this point of view. All modern logicians agree that judgment must be ampliative, must extend knowledge; that a "trifling proposition" is no judgment at all. What does this mean save that judgment is developmental, transitive, in effect and purport? And yet these same writers conceive of Reality as a *finished system of content in a complete and unchangeable single Judgment!* It is impossible to evade the contradiction save by recognizing that since it is the business of judgment to transform, its test (or Truth) is successful performance of the particular transformation it has set itself, and that transformation is temporal.

and is half way down, and is in the passage," etc. If I simply say, "He is going out," I am not a whit the less conscious that I judge all these different relations, but I then include them all in a single systematic content "going out." (P. 89.)

But is it a question of merest chance which of these various possibilities is actualized? Is Bosanquet really looking—as he thinks—at the actual life of thought, or is he considering, not what as a matter of fact does take place under a concrete set of circumstances, but what might take place under slightly differing sets of circumstances? If it is true that judgment is a crisis developing through adequate interaction of stimulus and response into a definite situation, beginning with doubt and ending with a solution of the doubt, then it is not true that its limits are purely arbitrary. It begins with the appearance of the problem and its tentative solutions, and ends with the solution of a final response. It does, of course, depend upon momentary interest, but this does not make its limits arbitrary, for the interest is inherent, not external. In the case of Bosanquet's illustration, the question of whether one judgment or half a dozen is made is not a question of merest chance. It depends upon where the interest of the person making the judgment is centered —in other words, upon what is the particular doubt to be solved. If the real doubt is as to whether the man will stay in his room or go out, then when he is heard leaving his room the solution comes in the form: "He is going out." But if the doubt is as to whether he will stay in his room, go out, or go into some other room, then the succession of judgments occurs, each of which solves a problem. "He has opened his door"—then he is not going to stay in his room; "He is going toward the staircase"—then he is not going into a room in the opposite direction, etc. It is impossible to conceive of such a series of judgments as actually being made, unless each one represents a problematic situation and its

determination. The only time that a man would, as a matter of fact, choose to break up the judgment, "He is going out," into such a series, would be the time when each member of the series had its own special interest as representing a specific uncertain aim or problem. Nor is it altogether true that in making the judgment, "He is going out," one is not a whit the less conscious that he judges all these different relations. He judges only such relations as are necessary to the solution of the problem in hand. If hearing the man open his door is a sufficient basis for the solution, then that is the only one which consciously enters into the formation of the judgment.

We have attempted to bring out in the preceding pages what seem to be the contradictions and insoluble problems involved in Bosanquet's theory of the judgment, and to exhibit them as the logical outcome of his metaphysical presuppositions. We have also tried to develop another theory of the judgment involving a different view of the nature of reality, and to show that the new theory is able to avoid the difficulties inherent in Bosanquet's system. The change in view-point briefly is this: Instead of regarding the real world as self-existent, independently of the judgments we make about it, we viewed it as the totality of experience which is assured, *i. e.*, determined as to certainty or specific availability, through the instrumentality of judgment. We thus avoided the essentially insoluble problem of how a real world whose content is self-existent quite outside of knowledge can ever be correctly represented by ideas. The difficulty in understanding the relation of the subject and the predicate of judgment to reality disappears when we cease to regard reality as self-existent outside of knowledge. Subject and predicate become instrumentalities in the process of building up reality. Thought no longer seems to carry us farther and farther from reality as ideas become

abstract and recede from the immediate sensory experience in which contact with the real occurs. On the contrary, thought carries us constantly toward reality. Finally, we avoid the fundamental skepticism about the possibility of knowledge which, from the other standpoint, is forced upon us by the long succession of facts which have faded into the realm of false opinions, and the lack of any guarantee that our present so-called knowledge of reality shall not meet the same fate. From that point of view, reality seems to be not only unknown, but unknowable.

The criticism sure to be passed upon the alternative view developed is that the solution of Bosanquet's problems which it affords is not a real solution, but rather the abandonment of an attempt at a solution. It represents reality as a thing which is itself in process of development. It would force us to admit that the reality of a hundred years ago, or even of yesterday, was not in content the reality of today. A growing, developing reality is, it will be said, an imperfect reality, while we must conceive of reality as complete and perfect in itself. The only answer which can be made is to insist again that we have no right to assume that reality is such an already completed existence, unless such an assumption enables us to understand experience and organize it into a consistent whole. The attempt of this paper has been to show that such a conception of reality really makes it inherently impossible to give an intelligible account of experience as a whole, while the view which regards reality as developing in and through judgment does enable us to build up a consistent and understandable view of the world. This suggests that the "perfect" may not after all be that which is finished and ended, but that whose reality is so abundant and vital as to issue in continuous self-modification. The Reality that evolves and moves may be more perfect, less finite, than that which has exhausted

itself. Moreover, only the view that Reality is developmental in quality, and that the instrument of its development is judgment involving the psychical in its determination of subject and predicate gives the psychical as such any significant place in knowledge or in reality. According to the view of knowledge as representation of an eternal content, the psychical is a mere logical surd.

VI

TYPICAL STAGES IN THE DEVELOPMENT OF JUDGMENT

Logic aims at investigating the general function of knowing. But knowing, it is commonly asserted, is constituted as judgment. Furthermore, there is reason to believe that judgment undergoes well-marked changes in its development. Consequently, an understanding of the judgment-function and of its epochs in development is of prime importance. In carrying through the investigation we shall endeavor, first, to state and to defend a certain presupposition with reference to the character of the judgment-function; second, to exhibit the application of this presupposition in the typical stages of judgment.

I

Judgment is essentially *instrumental.* This is the presupposition which we must explain and make good. And we shall accomplish this by way of an analysis of judgment as meaning.

It cannot be denied that what we call knowledge is concerned with the discrimination of valid meaning. To know is to appreciate the *meaning* of things and the meaning *of things* is the same with valid meaning. Judging determines knowledge, and in the same act develops meaning. To put it otherwise, knowledge is a matter of *content; content* is *meaning,* and we have knowledge when we have meaning satisfactorily determined. It is evident, therefore, that if we would understand the judging-function, we must first make clear to ourselves the nature and rôle of *meaning.*

Meaning is universally embodied in *ideas.* To know, to

understand the meaning, to get ideas, are the same. Now, in ideas two factors may be distinguished. First, every idea has as its base an image or emphasized portion of experience. In some forms of ideation we are more immediately aware of the presence of images than in others, but no idea—even the most abstract—can exist apart from an ultimate base. Second, every idea is equally a function of *reference* and *control*. As *reference*, the idea projects in the mind's view an anticipation of experiences and of the conditions upon which these experiences depend for their realization; as *control*, ideas are agencies in turning anticipations into realizations.[1]

To be more specific on both points: Since the days of Galton it has been almost a commonplace in psychology that ideas are embodied in forms of imagery which vary for and in different individuals. It has been maintained, it is true, that in abstract forms of thought, imagery disappears. This objection is met in two ways. For one, words—the vehicle of many abstract ideas—involve imagery of a most pronounced type: for another, every idea, when examined closely, discloses an image, no matter how much for the time being this has been driven into obscurity by the characteristics of reference and control. Furthermore, when we examine the anticipatory aspect of ideas, the presence of imagery both with reference to outcome and to conditions is so evident that its presence will scarcely be denied.

The second point may be illustrated in several ways. In everyday life anticipation and realization are inseparable from the nature and use of ideas. "Hat" means anticipation of protection to the head and the tendency toward setting in motion the conditions appropriate to the realization

[1]It is worth considering whether this may not be the reality of Royce's distinction between outer and inner meaning. An anticipation of experience is the working prerequisite of the control which will realize the idea, *i. e.*, the experience anticipated. One is no more "inner" or "outer" than the other.

of this anticipation. The same factors are evident in the boy's definition of a knife as "something to whittle with." Again it is maintained that intelligence is an essential factor in human self-consciousness. By this is meant that human beings are universally aware in some degree of what they are about. And this awareness consists in understanding the meaning of their actions, of forecasting the outcome of various kinds of activity, of apprehending beforehand the conditions connected with determinate results. Within this sphere we speak of certain men as being pre-eminently intelligent, meaning that for such men outcomes are previewed and connected with their appropriate conditions far beyond the range of ordinary foresight. Finally, scientific intelligence is essentially of this kind. It aims at understanding the varying types of process which operate in nature and thus at possessing itself of information with reference to results to be expected under determinate conditions. For example, the knowledge acquired in his researches by Louis Pasteur enabled him to predict the life or death of animals inoculated with charbon virus according as they had or had not been vaccinated previously. His information, in other words, became an instrument for the control and eradication of the disease. And what is true of this case is true of all science. To the scientist ideas are "working hypotheses" and have their value only as they enable him to predict, and to control. And while it is true that the scientist usually overlooks the so-called *practical* value of his discoveries, it is none the less true that in due time the inventor follows the investigator. The investigator is content to construct and show the truth of his idea. The inventor assumes the truth of the investigator's work and carries his idea as a constructive principle into the complications of life. To both men "knowledge is power," although the "power" may be realized in connection with

different interests. But if this be true, ideas can no longer be regarded as copies in individual experience of some pre-existing reality. They are rather instruments for transforming and directing experience, by way of constructing anticipations and the conditions appropriate to their realization. Herein also consists their truth or falsity. The true idea is reliable, carrying us from anticipation to realization; the false idea is unreliable, and fails in bringing the promised result.

Now, in the development of instruments generally, we may distinguish a rule-of-thumb or more or less unreflective stage of construction, and one entirely reflective. As to use there is the distinction of inexpert and expert control. This leads us to expect that in the thought-function also certain typical stages of construction and of control may be found. To the investigation of this point we shall next direct attention.

II

In its development from crude to expert forms judgment exhibits three typical stages—*the impersonal*, *the reflective*, and *the intuitive*. These we shall consider in order of development. But first it is to be noticed that these stages of judgment are not to be regarded as hard and fast distinctions of the kind that no indications of the higher are to be found in the lower types, but rather as working distinctions within a process of continuous development.

1. *The impersonal judgment.*—Ever since the days of the Greek grammarians the impersonal judgment has been considered an anomaly in logic. And the reason is not far to seek. From the time of Aristotle it has been customary to maintain that judgments, when analyzed, disclose a subject and a predicate. Logically considered, these appear to be entirely correlative, for, as Erdmann puts it,[1] "an event

[1] *Logik*, p. 304.

without a substrate, a quality without a subject, is altogether unpresentable." But there is in all languages a class of judgments, such as, "It rains," "It snows," "Fire!" in which no directly asserted subject is discoverable. To these the name impersonal and subjectless has been given. Here then is the difficulty. If we admit that the impersonal expression involves predication, we must, in all consistency, search for a subject, while at the same time the subject refuses to disclose itself. In ancient days the orthodox logician confined his search to language and to the spoken or written proposition. The unorthodox critic maintained, in opposition to this, that a subject was provided only by warping and twisting the natural sense of the impersonal expression. And thus the matter stood until the development of modern comparative philology. It was then demonstrated beyond the possibility of doubt that the "it" (or its equivalent) of the impersonal is a purely contentless form word. Language provides no subject whatsoever. So strong, however, is the hold of tradition that the search has been renewed. Attention has been turned upon the mental processes involved, and this time with more apparent result. Although there has been no general agreement with reference to the subject, a classification of the different views may still be made. (*a*) The subject is universal and undetermined; (*b*) it is individual and more or less determined; (*c*) between these extremes lies almost every intermediate degree conceivable.

Ueberweg maintains that the subject of the impersonal is the actual totality of present experience. When we ask, "What rains?" we must understand a reference to our general environment, in which no special element is singled out. Sigwart, on the other hand, maintains that the subject can be construed only as the actual sense-impression. This diversity of opinion might seem to indicate that, were it not for the constraining power of theory, a subject would scarcely

be thought of for the impersonal. Still it must be admitted that when we examine the impersonal expression closely we can discover a sense-impression, whether definite or indefinite, combined with an idea. This would seem to give the case to the orthodox logician, for he will at once claim the sense-impression as the subject and the idea as the predicate of the judgment. But we must have a care. Predication is usually held to consist in a *reference* of predicate *to* subject. The factors of the judgment are, as it were, held apart. In the impersonal no such thing as this can be discovered. The meaning is so close a unity that impression and idea are entirely fused. We may analyze the expression and find them there, but by so doing we destroy the immediacy which is an essential characteristic of the impersonal. In other words, the impersonal does not analyze itself. It is entirely unconscious of its make-up. And yet it is definite and applies itself with precision: If I am in a lecture-hall and hear the fire-alarm, the thought "Fire!" which enters my mind leads to an immediate change in my conduct. I arise, move quietly out, and prepare for duty. If, on the other hand, I open the street door and the rain strikes my face, I ejaculate "Raining!" turn, reach for my umbrella, and pass out protected. In both cases I act *knowingly* and with *meaning*, but I do not analyze the movement either of thought or of action. A correlate to the unreflective impersonal judgment is found in early custom. Custom embodies social ideas and is an instrument for the determination and control of action. Individuals moved by custom know what they are about and act with precision according as custom may demand. But it is notorious that custom is direct and unreflective. It represents social instruments of control which have grown up without method and which represent the slow accretion of rule-of-thumb activities through many ages. So in the impersonal judgment we have a type of

intellectual instrument which has been brought to a high degree of precision in use, but which still retains the simplicity and certainty of an unquestioned instrument of action. For this reason, whatever complexity of elements the impersonal may present to a reflective view, it does not contain to itself. Consequently it may be best to say that to the impersonal there is neither subject, predicate, nor reference of the one to the other. These are distinctions which arise only when the instrument of action has been questioned and the mind turns back upon the meaning which it has unhesitatingly used, analyzing, investigating, constructing, laying bare the method and function of its tools. Thus arises a new and distinctive type of judgment, viz., the reflective.

2. *The reflective judgment.*—By the reflective judgment is to be understood that form of meaning whose structure and function have become a problem to itself. The days of naïve trust and spontaneous action have gone by. Inquiry, criticism, aloofness, stay the tendency to immediate action. Meaning has grown worldly wise and demands that each situation shall explain itself and that the general principles and concrete applications of its own instruments shall be made manifest. Hence in the various forms of reflective thought we find the progressive steps in which meaning comes to full consciousness of its function in experience.

The demonstrative judgment (the simplest of the reflective type) carries doubt, criticism, construction, and assertion written on the face of it. For example, in the expression, "That is hot," we do not find the directness and immediacy of response characteristic of the simpler impersonal "hot." Instead, we note a clash of tendencies, a suspension of the proposed action, a demand for and a carrying out of a reconsideration of the course of action, the emergence of a new meaning, and the consequent redirection of activities. An iron lies upon the hearth; I stretch out my hand to return it

to its place; I stop suddenly, having become conscious of signs of warmth; the thought arises in my mind, "That is hot;" I experiment and find my judgment correct; I search for a cloth, and thus protected carry out my first intention. Again, a hunter notes a movement in the thicket, quickly raises his gun, and is about to fire. Something in the movement of the object arrests him. He stops, thinking, "That is a man, perhaps." What has caught the eye has arrested his action, has become a demand, and not until the situation has become clear can the hunter determine what to do. In other words, he must reflectively assure himself what the object is before he can satisfy himself as to how he should act. Subject and predicate have arisen and have consciously played their parts in the passage from doubt to decision.

Under the heading "individual judgments" are classed such expressions as, "That ship is a man-o'-war," "Russia opposes the policy of the open door in China." In both these cases it is evident that an advance in definiteness of conception and of complexity of meaning has been made, while at the same time we recognize that the instrumental characteristics of the thought-movement remain the same. In considering the subject of the judgment we note that the stimulus presents itself partly as a determinate factor and partly as a problem — an insistent demand. The expression, "That ship is a man-o'-war," might be written, "That is a ship and of the kind man-o'-war," and it thus constitutes what Sigwart calls a "double synthesis." As used in actual judgment, however, the two are held together and constitute the statement of a single stimulus of which a certain portion is evident and a certain portion is in doubt. The working out of the difficulty is given in the predicate "is a man-o'-war," in which we at once detect the instrumental characteristics fundamental to all judgment. To illustrate: At the

close of the battle of Santiago, in the Spanish-American war, smoke appeared upon the horizon revealing the presence of a strange ship. Instantly attention was directed to it, and it became a problem for action—a demand for instrumental information. Soon it was identified as a man-o'-war, and the American ships were cleared for action. Closer approach raised a further question with reference to its nationality. After some debate this also was resolved, and hostile demonstrations were abandoned.

The universal judgment is sometimes said to exhibit two distinct forms. Investigation, however, has proved this statement to be incorrect. Instances taken in themselves and apart from their character are of no logical significance. Advance is made by weighing instances and not by counting them. In short, the true universal is the hypothetical judgment, and the reason for this may be readily shown. The hypothetical judgment is essentially double-ended. On the one hand, it is a statement of the problem of action in terms of the conditions which will turn the problem into a solution. On the other hand, it is an assertion that once the conditions of action have been determined the result desired may be attained. Here we note that the judgment has come to clear consciousness of itself and of the part which it plays in experience. It has now obtained an insight into the criterion of its legitimate employment, *i. e.*, of its truth and falsity. And this insight makes the justification of its claim almost self-evident. For, inasmuch as the hypothetical judgment says, "If such and such conditions be realized, such and such a result will be obtained," the test of the claim is made by putting the conditions into effect and watching whether the promised experience is given. And further, since it has been found that the judgment formulated as a hypothesis actually accomplishes what it promises, we must admit that the hypothetical judgment is also categorical.

These two factors cannot be separated from each other. It is true that the hypothetical judgment reduces every valid meaning to the form, "*If* certain conditions be realized," but it as plainly and positively asserts, "such and such results *will* be obtained." When we grasp the absolute correlativity of the hypothetical and categorical aspects of judgment, we realize at once the essentially instrumental character of judgment, when it comes to consciousness of its structure and function. It arises in the self-conscious realization of a problem. This it reflects upon and sizes up. When the difficulty has been apprehended, the judgment emerges as the consciousness of the conditions which will attain the desired end of action freed and unimpeded. This may be illustrated by reference to the work of Pasteur cited above. His investigations began in a problem set for him by agricultural conditions in France. A certain disease had made the profitable rearing of sheep and cattle almost an impossibility. After long and careful examination he discovered the beneficial effects of vaccination. To him the conditions which governed the presence of the disease became apparent, and this knowledge furnished him with an instrument by means of which one difficulty was removed from the path of the stock-raiser. In this illustration we have an epitome of the work accomplished everywhere by the scientist. It is his task to develop and to reduce to exact terms instruments of control for the varied activities of life. In its parts and as a whole each instrument is intelligently constructed and tested so that its make-up and function are exactly known. Because of this, reasoned belief now takes the place of unreflective trust as that was experienced in the impersonal stage of judgment. What at first hand might appear to be a loss was in reality a gain; the breakdown of the impersonal was the first step in the development of an instrument of action conscious of its reason for being, its methods and

conditions of action. These latter constitute the distinctive subject and predicate of the reflective judgment.

This brings us to the connection between the hypothetical character of this form of judgment and its universality. And this perhaps will now be quite apparent. The reflective judgment lays bare an objective connection between the conditions and outcomes of actions. It proves its point by actually constructing the event. Such being the case, universality is no more than a statement of identical results being predictable wherever like conditions are realized. If it be true that "man is mortal," then it is an identical statement to insist that, "Wherever we find men there we shall also find mortality."

And this point brings us naturally to the treatment of the disjunctive judgment: "A is either B or C or D." In the disjunctive judgment the demand is not for the construction of a reliable instrument of action, but for the resolution of a doubt as to which instrument is precisely fitted to the circumstances. In fact, the disjunctive judgment involves the identification of the practical problem. When we say of a man, "He is either very simple or very deep," we have no doubt as to our proper course of action in either case. If he is simple, then we shall do so and so; if he is deep, then another course of action follows. We can lay out alternative courses beforehand, but the point of difficulty lies here: "But just which is he?" In short, the disjunctive judgment is the demand for and the attempt at a precise diagnosis of a concrete problem. To illustrate: A patient afflicted with aphasia is brought to a physician. The fact that the trouble is aphasia may be quite evident. But what precisely is the form and seat of the aphasia? To the mind of the educated physician the problem will take on the disjunctive form: "This is either subcortical or cortical aphasia. If subcortical, intelligence will not be impaired; if cortical, the sensor

and motor tracts will be in good condition." Appropriate tests are made and the subcortical possibilities are shut out. The disjunction disappears and the judgment emerges: "This is a case of cortical aphasia. But now a new disjunction arises. It is either the sensory or motor form of cortical aphasia, and, whichever one of these, it is again one of several possibilities. As the alternatives arise, the means for discriminating them arise also; determinate symptoms are observed, and in due time the physician arrives at the final conclusion: "This is sensory cortical aphasia of the visual type." Having determined this, his method of action is assured, and he proceeds to the appropriate operation. Thus, finally, we are brought to a form of judgment aware not only of its motive, method, and justification, but also to one aware of its specific application to individual cases. Thus it would seem as though judgment had returned upon itself and had completed the determination of its sphere of action. And in one sense this is true. In the disjunctive judgment, as inclusive of the motives of the hypothetical and categorical forms, the reflective judgment would appear to have come to its limit of development. One thing, however, remains to be considered, viz., the development from crude to expert uses of intellectual instruments.

3. *The intuitive judgment.*—As stated above, the intuitive type of judgment depends upon efficiency in the use of judgment. In this regard there is a great similarity between the impersonal and the intuitive judgments. Both are immediate and precise. But there is a radical and essential difference. The impersonal judgment knows nothing of the strict analysis, insight, and constructive power of the reflective judgment. The intuitive judgment, on the other hand, includes the results of reflection and brings them to their highest power. Paradoxically put, in the intuitive judgment there is so much reflection that there is no need for

it at all. To the intuitive judgment there is no hesitation, no aloofness. Action is direct, but entirely self-conscious. That such a type of judgment as the intuitive exists there can be no doubt. There is all the difference in the world between the quality of consciousness of a mere layman and that of an expert, no matter what the line. The layman must size up a situation. It is a process whose parts are successive, whether much or little difficulty be experienced. For the expert situations are taken in at a glance, parts and whole are simultaneous and immediate. Yet the meaning is entirely exact. The expert judgment is self-conscious to the last degree. While other individuals are thinking out what to do, the expert has it, sees the advantage, adjusts, and moves. Demand and solution jump together. How otherwise can we explain, for example, the action of an expert ball-player? Witness his rapid reactions, his instantaneous adjustments. Mistakes of opponents which would never be noticed by the average player are recognized and seized upon. On the instant the new opening is seen, the adjustment is evident, the movement made. Illustrations to the same effect could be drawn from other modes of life, *e. g.*, music, the military life, etc. That intuitive judgments are not more common is a proof in itself of their distinctive character and value. Only in so far as we become experts in our special fields of experience and have reduced our instruments of action to precise control, can we expect the presence of intuitive judgments. They remain, therefore, as the final outcome of the judgment-function made perfect in its technique and use.

In conclusion we shall make a brief summary of our investigation and a criticism of certain current theories of judgment.

Judgment is essentially instrumental. Its function is to construct, justify, and refine experience into exact instruments

for the direction and control of future experience through action. It exhibits itself first in the form of instruments developed unsystematically in response to the hard necessities of life. In a higher stage of development the instrumental process itself is taken into account, and systematically developed until in the methodical procedure of science the general principles of knowledge are laid bare and efficient instruments of action constructed. Finally, constant, intelligent use results in complete control, so that within certain spheres doubt and hesitancy would seem to disappear as to the character of the tools used, and remain only as a moment in determining their wisest or most appropriate employ.

The criticism indicated is based upon the instrumental character of judgment and is directed against all theories which contend that knowledge is a "copying" or "reproducing" of reality. In whatever form this "copy" theory be stated, the question inevitably arises how we can compare our ideas with reality and thus know their truth. On this theory, what we possess is ever the copy; the reality is beyond. In other words, such a theory logically carried out leads to the breakdown of knowledge. Only a theory which contains and constructs its criterion within its own specific movement can verify its constructions. Such a theory is the instrumental. Judgment constructs a situation in consciousness. The values assigned in this situation have a determining influence upon values further appreciated. The construction arrived at concerns future weal and woe. Thus gradually a sense of truth and falsity attaches to the construing of situations. One sees that he *must* look beyond *this* situation, because the way he estimates *this* situation is fraught with meaning beyond itself. Hence the critically reflective judgment in which hesitancy and doubt direct themselves at the attitude, elements, and tools involved in

defining and identifying the situation, instead of at the situation itself *in toto*. Instead of developing a complex of experience through assigning qualities and meanings to the *situation* as such, some one of the quales is selected, to have *its* significance determined. It becomes, *pro tempore*, the situation judged. Or the same thing takes place as regards some "idea" or value hitherto immediately fastened upon and employed. In either case we get the reflective judgment, the judgment of pure relationship as distinct from the constructive judgment. But the judgment of relation, employing the copula to refer a specified predicate to a specified object, is after all only for the sake of controlling some immediate judgment of constructive experience. It realizes itself in forming the confident habit of prompt and precise mental adjustment to individualized situations.

VII

THE NATURE OF HYPOTHESIS

In the various discussions of the hypothesis which have appeared in works on inductive logic and in writings on scientific method, its structure and function have received considerable attention, while its origin has been comparatively neglected. The hypothesis has generally been treated as that part of scientific procedure which marks the stage where a definite plan or method is proposed for dealing with new or unexplained facts. It is regarded as an invention for the purpose of explaining the given, as a definite conjecture which is to be tested by an appeal to experience to see whether deductions made in accordance with it will be found true in fact. The function of the hypothesis is to unify, to furnish a method of dealing with things, and its structure must be suitable to this end. It must be so formed that it will be likely to prove valid, and writers have formulated various rules to be followed in the formation of hypotheses. These rules state the main requirements of a good hypothesis, and are intended to aid in a general way by pointing out certain limits within which it must fall.

In respect to the origin of the hypothesis, writers have usually contented themselves with pointing out the kind of situations in which hypotheses are likely to appear. But after this has been done, after favorable external conditions have been given, the rest must be left to "genius," for hypotheses arise as "happy guesses," for which no rule or law can be given. In fact, the genius differs from the ordinary plodding mortal in just this ability to form fruitful

hypotheses in the midst of the same facts which to other less gifted individuals remain only so many disconnected experiences.

This unequal stress which has been laid on the structure and function of the hypothesis in comparison with its origin may be attributed to three reasons: (1) The facts, or data, which constitute the working material of hypotheses are regarded as given to all alike, and all alike are more or less interested in systematizing and unifying experience. The purpose of the hypothesis and the opportunity for forming it are thus practically the same for all, and hence certain definite rules can be laid down which will apply to all cases where hypotheses are to be employed. (2) But beyond this there seems to be no clue that can be formulated. There is apparently a more or less open acceptance of the final answer of the boy Zerah Colburn, who, when pressed to give an explanation of his method of instantaneous calculation, exclaimed in despair: "God put it into my head, and I can't put it into yours."[1] (3) And, furthermore, there is very often a strong tendency to disregard investigation into the origin of that which is taken as given, for, since it is already present, its origin, whatever it may have been, can have nothing to do with what it is now. The facts, the data, are *here*, and must be dealt with as they *are*. Their past, their history or development, is entirely irrelevant. So, even if we could trace the hypothesis farther back on the psychological side, the investigation would be useless, for the rules to which a good hypothesis must conform would remain the same.

Whether or not it can be shown that Zerah Colburn's ultimate explanation is needed in logic as little as Laplace asserted a similar one to be required in his celestial me-

[1] DE MORGAN, *Budget of Paradoxes*, pp. 55, 56; quoted by WELTON, *Logic*, Vol. II, p. 60.

chanics, it may at least be possible to defer it to some extent by means of a further psychological inquiry. It will be found that psychological inquiry into the origin of the hypothesis is not irrelevant in respect to an understanding of its structure and function; for origin and function cannot be understood apart from each other, and, since structure must be adapted to function, it cannot be independent of origin. In fact, origin, structure, and function are organically connected, and each loses its meaning when absolutely separated from each other. It will be found, moreover, that the data which are commonly taken as the given material are not something to which the hypothesis is subsequently applied, but that, instead of this external relation between data and hypothesis, the hypothesis exercises a directive function in determining what are the data. In a word, the main object of this discussion will be to contend against making a merely convenient and special way of regarding the hypothesis a full and adequate one. Though we speak of facts and of hypotheses that may be applied to them, it must not be forgotten that there are no facts which remain the same whatever hypothesis be applied to them; and that there are no hypotheses which are hypotheses at all except in reference to their function in dealing with our subject-matter in such a way as to facilitate its factual apprehension. Data are selected in order to be determined, and hypotheses are the ways in which this determination is carried on. If, as we shall attempt to show, the relation between data and hypothesis is not external, but strictly correlative, it is evident that this fact must be taken into account in questions concerning deduction and induction, analytic and synthetic judgments, and the criterion of truth. Its bearing must be recognized in the investigation of metaphysical problems as well, for reality cannot be independent of the knowing process. In a word, the purpose of this discussion of the

hypothesis is to determine its nature a little more precisely through an investigation of its rather obscure origin, and to call attention to certain features of its function which have not generally been accorded their due significance.

I

The hypothesis as predicate.—It is generally admitted that the function of the hypothesis is to provide a way of dealing with the data or subject-matter which we need to organize. In this use of the hypothesis it appears in the rôle of predicate in a judgment of which the data, or facts, to be construed constitute the subject.

In his attempts to reduce the movements of the planets about the sun to some general formula, Kepler finally hit upon the law since known as Kepler's law, viz., that the squares of the periodic times of the several planets are proportional to the cubes of their mean distances from the sun. This law was first tentatively advanced as a hypothesis. Kepler was not certain of its truth till it had proved its claim to acceptance. Neither did Newton have at first any great degree of assurance in regard to his law of gravitation, and was ready to give it up when he failed in his first attempt to test it by observation of the moon. And the same thing may be said about the caution of Darwin and other investigators in regard to accepting hypotheses. The only reason for their extreme care in not accepting at once their tentative formulations or suggestions was the fear that some other explanation might be the correct one. This rejection of other possibilities is the negative side of the matter. We become confident that our hypothesis is the right one as we lose confidence in other possible explanations; and it might be added, without falling into a circle, that we lose confidence in the other possibilities as we become more convinced of our hypothesis.

It appears that such may be the relation of the positive and negative sides in case of such elaborate hypotheses as those of Kepler and Newton; but is it true where our hypotheses are more simple? It is not easy to understand why the fact that the hypothesis is more simple, and the time required for its formulation and test a good deal shorter, should materially change the state of affairs. The question remains: Why, if there is no opposition, should there be any uncertainty? In all instances, then, the hypothesis appears as one among other possible predicates which may be applied to our data taken as subject-matter of a judgment.

The predicate as hypothesis.—Suppose, then, the hypothesis is a predicate; is the predicate necessarily a hypothesis? This is the next question we are called upon to answer, and, since the predicate cannot very well be taken aside from the judgment, our question involves the nature of the judgment.

While it will not be necessary to give a very complete account of the various definitions of the judgment that might be adduced, still the mention of a few of the more prominent ones may serve to indicate that something further is needed. In definitions of the judgment sometimes the subjective side is emphasized, sometimes the objective side, and in other instances there are attempts to combine the two. For instance, Lotze regards the judgment as the idea of a unity or relation between two concepts, with the further implication that this connection holds true of the object referred to. J. S. Mill says that every proposition either affirms or denies existence, coexistence, sequence, causation, or resemblance. Trendelenburg regards the judgment as a form of thought which corresponds to the real connection of things, while Ueberweg states the case a little differently, and says that the essence of judgment consists in recognizing the

objective validity of a subjective connection of ideas. Royce points to a process of imitation and holds that in the judgment we try to portray by means of the ideas that enter into it. Ideas are imitative in their nature. Sigwart's view of the judgment is that in it we say something about something. With him the judgment is a synthetic process, while Wundt considers its nature analytic and holds that, instead of uniting, or combining, concepts into a whole, it separates them out of a total idea or presentation. Instead of blending parts into a whole, it separates the whole into its constituent parts. Bradley and Bosanquet both hold that in the judgment an ideal content comes into relation with reality. Bradley says that in every judgment reality is qualified by an idea, which is symbolic. The ideal content is recognized as such, and is referred to a reality beyond the act. This is the essence of judgment. Bosanquet seems to perceive a closer relation between idea and reality, for although he says that judgment is the "intellectual function which defines reality by significant ideas," he also tells us that "the subject is both in and out of the judgment, as Reality is both in and out of my consciousness."

In all these definitions of judgment the predicate appears as ideal. An ideal content is predicated of something, whether we regard this something as an idea or as reality beyond, or as reality partly within and partly without the act of judging; and it is ideal whether we consider it as one of the three parts into which judgments are usually divided, or whether we say, with Bosanquet and Bradley, that subject, predicate, and copula all taken together form a single ideal content, which is somehow applied to reality. Moreover, we not only judge about reality, but it seems to be quite immaterial to reality whether we judge concerning it or not.

Many of our judgments prove false. Not only do we err

in our judgments, but we often hesitate in making them for fear of being wrong; we feel there are other possibilities, and our predication becomes tentative. Here we have something very like the hypothesis, for our ideal content shows itself to be a tentative attempt in the presence of alternatives to qualify and systematize reality. It appears, then, on the basis of the views of the judgment that have been mentioned, that not only do we find the hypothesis taking its place as the predicate of a judgment, but the predicate is itself essentially of the nature of a hypothesis.

In the views of the judgment so far brought out, reality, with which it is generally admitted that the judgment attempts to deal in some way, appears to lie outside the act of judging. Now, everyone would say that we make some advance in judging, and that we have a better grasp of things after than before. But how is this possible if reality lies without or beyond our act of judging? Is the reality we now have the same that we had to begin with? If so, then we have made no advance as far as the real itself is concerned. If merely our conception of it has changed, then it is not clear why we may not be even worse off than before. If reality does lie beyond our judgment, then how, in the nature of the case, can we ever know whether we have approached it or have gone still farther away? To make any claim of approximation implies that we do reach reality in some measure, at least, and, if so, it is difficult to understand how it lies beyond, and is independent of, the act of judging.

Further analysis of judgment.— It remains to be seen whether a further investigation of the judgment will still show the predicate to be a hypothesis. It is evident that in some cases the judgment appears at the end of a more or less pronounced reflective process, during which other possible judgments have suggested themselves, but have been

rejected. The history of scientific discovery is filled with cases which illustrate the nature of the process by which a new theory is developed. For instance, in Darwin's *Formation of Vegetable Mould through the Action of Earth Worms*, we find the record of successive steps in the development of his hypothesis. Darwin suspected from his observations that vegetable mold was due to some agency which was not yet determined. He reasoned that if vegetable mold is the result of the life-habits of earthworms, *i. e.*, if earth is brought up by them from beneath the surface and afterward spread out by wind and rain, then small objects lying on the surface of the ground would tend to disappear gradually below the surface. Facts seemed to support his theory, for layers of red sand, pieces of chalk, and stones were found to have disappeared below the surface in a greater or less degree. A common explanation had been that heavy objects tend to sink in soft soil through their own weight, but the earthworm hypothesis led to a more careful examination of the data. It was found that the weight of the object and the softness of the ground made no marked difference, for sand and light objects sank, and the ground was not always soft. In general, it was shown that where earthworms were found vegetable mold was also present, and *vice versa*.

In this investigation of Darwin's the conflicting explanations of sinking stones appear within the main question of the formation of vegetable mold by earthworms. The facts that disagreed with the old theory about sinking stones were approached through this new one. But the theories had something in common, viz., the disappearance of the stones or other objects: they differed in their further determination of this disappearance. In this case it may seem as if the facts which were opposed to the current theory of sinking stones were seen to be discrepant only after the earthworm hypothesis had been advanced; the conflict between the new facts

and the old theory appears to have arisen through the influence of the new theory.

There are cases, however, where the facts seem clearly to contradict the old theory and thus give rise to a new one. For example, we find in Darwin's introduction to his *Origin of Species* the following: "In considering the origin of species it is quite conceivable that a naturalist reflecting on the mental affinities of organic beings, on their embryological relations, their geographical distribution, geological succession, and other such facts, might come to the conclusion that species had not been independently created but had descended, like varieties, from other species." It would seem from this statement that certain data were found for which the older theory of independent creation did not offer an adequate explanation. And yet the naturalist would hardly "reflect" on all these topics in a comparative way unless some other mode of interpretation were already dawning upon him, which led him to review the accepted reflections or views.

As a more simple illustration, we may cite the common experience of a person who is uncertain concerning the identity of an approaching object, say, another person. At first he may not be sure it is a person at all. He then sees that it is someone, and as the person approaches he is inclined to believe him to be an acquaintance. As the supposed acquaintance continues to approach, the observer may distinguish certain features that cause him to doubt, and then relinquish his supposition that it is an acquaintance. Or, he may conclude at once that the approaching person is another individual he knows, and the transition may be so readily made from one to the other that it would be difficult to determine whether the discordant features are discordant before the new supposition arises, or whether they are not recognized as conflicting till this second person is in mind.

Or, again, the identification of the new individual and the discovery of the features that are in conflict with the first supposition may appear to go on together.

Now, marked lines of likeness appear between this relatively simple judgment and the far more involved ones of scientific research. In the more extended scientific process we find data contradicting an old theory and a new hypothesis arising to account for them. The hypothesis is tested, and along with its verification we have the rejection, or rather the modification, of the old theory. Similarly, in case of the approaching stranger all these features are present, though in less pronounced degree. In scientific investigation there is an interval of testing by means of more careful consideration of the data and even actual experimentation. Before an explanation is accepted subject to test, a number of others may have been suggested and rejected. They may not have received even explicit recognition. In case of the identification of the stranger this feature is also present. Between two fairly definite attempts to identify the mind does not remain a mere blank or stationary, but other possible identifications may be suggested which do not have sufficient plausibility to command serious attention; they are only comparatively brief suggestions or tendencies.

It is to be noted that in all these instances the first supposition was not *entirely* abandoned, but was modified and more exactly determined. (Why it could not be wholly false and the new one wholly new, will be considered later in connection with discussion of the persistence and reformation of habit.) There was such a modification of the old theory as would meet the requirements of the new data, and the new explanations thus contained both old and new features.

We have seen that the predicate of the scientific judg-

ment is a hypothesis which is consciously applied to certain data. If the similarity between the scientific judgment and the more immediate and simple judgment is to be maintained, it is clear that the predicate of the simple judgment must be of like nature. The structure of the two varieties of judgment differs only in the degree of explicitness which the hypothesis acquires. That is, the predicate of a judgment, as such, is ideal; it is meaning, significant quality. If conditions are such as to make the one judging hesitant or doubtful the mind wavers; the predicate is not applied at once to the determination or qualification of data, and hence comes to more distinct consciousness on its own account. From being "ideal," it becomes *an* idea. Yet its sole purpose and value remains in its possible use to interpret data. Let the idea remain detached, and let the query whether it be a true predicate (*i. e.*, really fit to be employed in determining the present data) become more critical, and the idea becomes clearly a hypothesis.[1] In other words, the hypothesis is just the predicate-function of judgment definitely apprehended and regarded with reference to its nature and adequacy.

Psychological analysis of judgment.—This hypothetical nature of the predicate will be even more apparent after a further psychological analysis, which, while applying more directly to the simpler and more immediate judgments, may be extended to the more involved ones as well.

In psychological terms, we may say, in explanation of the judging process, that some stimulus to action has failed to function properly as a stimulus, and that the activity

[1]Advanced grammarians treat this matter in a way which should be instructive to logicians. The hypothesis, says SWEET (§ 295 of *A New English Grammar, Logical and Historical*, Oxford, 1892), suggests an affirmation or negation "as objects of thought." "In fact, we often say *supposing* (that is, 'thinking') *it is true*, instead of *if it is true*." In a word, the hypothetical judgment as such puts explicitly before us the content of thought, of the predicate or hypothesis; and in so far is a moment in judgment rather than adequate judgment itself.

which was going on has thus been interrupted. Response in the accustomed way has failed. In such a case there arises a division in experience into sensation content as subject and ideal content as predicate. In other words, an activity has been going on in accordance with established habits, but upon failure of the accustomed stimulus to be longer an adequate stimulus this particular activity ceases, and is resumed in an integral form only when a new habit is set up to which the new or altered stimulus is adequate. It is in this process of reconstruction that subject and predicate appear. Sensory quality marks the point of stress, or seeming arrest, while the ideal or imaged aspect defines the continuing activity as projected, and hence that with which start is to be made in coping with the obstacle. It serves as standpoint of regard and mode of indicated behavior. The sensation stands for the interrupted habit, while the image stands for the new habit, that is, the new way of dealing with the subject-matter.[1]

It appears, then, that the purpose of the judgment is to obtain an adequate stimulus in that, when stimulus and response are adjusted to each other, activity will be resumed. But if this reconstruction and response were to follow at once, would there be any clearly defined act of judging at all? In such a case there would be no judgment, properly speaking, and no occasion for it. There would be simply a ready transition from one line of activity to another; we should have changed our method of reaction easily and readily to meet the new requirements. On the one hand, our subject-matter would not have become a clearly recognized datum with which we must deal; on the other hand, there would be no ideal method of construing it.[2] Activity

[1] This carries with it, of course, the notion that "sensation" and "image" are not distinct psychical existences in themselves, but are distinguished logical forces.

[2] Concerning the strict correlativity of subject and predicate, data and hypothesis, see p. 34.

would have changed without interruption, and neither subject nor predicate would have arisen.

In order that judgment may take place there must be interruption and suspense. Under what conditions, then, is this suspense and uncertainty possible? Our reply must be that we hesitate because of more or less sharply defined alternatives; we are not sure which predicate, which method of reaction, is the right one. The clearness with which these alternatives come to mind depends upon the degree of explicitness of the judgment, or, more exactly, the explicitness of the judgment depends upon the sharpness of these alternatives. Alternatives may be carefully weighed one against the other, as in deliberative judgments; or they may be scarcely recognized as alternatives, as in the case in the greater portion of our more simple judgments of daily conduct.

The predicate is essentially hypothetical.—If we review in a brief résumé the types of judgment we have considered, we find in the explicit scientific judgment a fairly well-defined subject-matter which we seek further to determine. Different suggestions present themselves with varying degrees of plausibility. Some are passed by as soon as they arise. Others gain a temporary recognition. Some are explicitly tested with resulting acceptance or rejection. The acceptance of any one explanation involves the rejection of some other explanation. During the process of verification or test the newly advanced supposition is recognized to be more or less doubtful. Besides the hypothesis which is tentatively applied there is recognized the possibility of others. In the disjunctive judgment these possible reactions are thought to be limited to certain clearly defined alternatives, while in the less explicit judgments they are not so clearly brought out. Throughout the various forms of judgment, from the most complex and deliberate down to

the most simple and immediate, we found that a process could be traced which was like in kind and varied only in degree. And, finally, in the most immediate judgments where some of these features seem to disappear, the same account not only appears to be the most reasonable one, but there is the additional consideration, from the psychological side, that were not the judgment of this doubtful, tentative character, it would be difficult to understand how there could be judgment as distinct from a reflex. It appears, then, that throughout, the predicate is essentially of the nature of a hypothesis for dealing with the subject-matter. And, however simple and immediate, or however involved and prolonged, the judgment may be, it is to be regarded as essentially a process of reconstruction which aims at the resumption of an interrupted experience; and when experience has become itself a consciously intellectual affair, at the restoration of a unified objective situation.

II

Criticism of certain views concerning the hypothesis.— The explanation we have given of the hypothesis will enable us to criticise the treatment it has received from the empirical and the rationalistic schools. We shall endeavor to point out that these schools have, in spite of their opposed views, an assumption in common—something given in a fixed, or non-instrumental way; and that consequently the hypothesis is either impossible or else futile.

Bacon is commonly recognized as a leader in the reactionary inductive movement, which arose with the decline of scholasticism, and will serve as a good example of the extreme empirical position. In place of authority and the deductive method, Bacon advocated a return to nature and induction from data given through observation. The new method which he advanced has both a positive and a

negative side. Before any positive steps can be taken, the mind must be cleared of the various false opinions and prejudices that have been acquired. This preliminary task of freeing the mind from "phantoms," or "eidola," which Bacon likened to the cleansing of the threshing-floor, having been accomplished, nature should be carefully interrogated. There must be no hasty generalization, for the true method "collects axioms from sense and particulars, ascending continuously and by degrees, so that in the end it arrives at the most general axioms." These axioms of Bacon's are generalizations based on observation, and are to be applied deductively, but the distinguishing feature of Bacon's induction is its carefully graduated steps. Others, too, had proceeded with caution (for instance Galileo), but Bacon laid more stress than they on the subordination of steps.

It is evident that Bacon left very little room for hypotheses, and this is in keeping with his aversion to anticipation of nature by means of "phantoms" of any sort; he even said explicitly that "our method of discovery in science is of such a nature that there is not much left to acuteness and strength of genius, but all degrees of genius and intellect are brought nearly to the same level."[1] Bacon gave no explanation of the function of the hypothesis; in his opinion it had no lawful place in scientific procedure and must be banished as a disturbing element. Instead of the reciprocal relation between hypothesis and data, in which hypothesis is not only tested in experience, but at the same time controls in a measure the very experience which tests it, Bacon would have a gradual extraction of general laws from nature through direct observation. He is so afraid of the distorting influence of conception that he will have nothing to do with conception upon any terms. So fearful is he of the influence of pre-judgment, of prejudice, that he will have

[1] *Novum Organum*, Vol. I, p. 61.

no judging which depends upon ideas, since the idea involves anticipation of the fact. Particulars are somehow to arrange and classify themselves, and to record or register, in a mind free from conception, certain generalizations. Ideas are to be registered derivatives of the given particulars. This view is the essence of empiricism as a logical theory. If the views regarding the logic of thought before set forth are correct, it goes without saying that such empiricism is condemned to self-contradiction. It endeavors to construct judgment in terms of its subject alone; and the subject, as we have seen, is always a co-respondent to a predicate — an idea or mental attitude or tendency of intellectual determination. Thus the subject of judgment can be determined only with reference to a corresponding determination of the predicate. Subject and predicate, fact and idea, are contemporaneous, not serial in their relations (see pp. 110–12).

Less technically the failure of Bacon's denial of the worth of hypothesis — which is in such exact accord with empiricism in logic — shows itself in his attitude toward experimentation and toward observation. Bacon's neglect of experimentation is not an accidental oversight, but is bound up with his view regarding the worthlessness of conception or anticipation. To experiment means to set out from an idea as well as from facts, and to try to construe, or even to discover, facts in accordance with the idea. Experimentation not only anticipates, but strives to make good an anticipation. Of course, this struggle is checked at every point by success or failure, and thus the hypothesis is continuously undergoing in varying ratios both confirmation and transformation. But this is not to make the hypothesis secondary to the fact. It is simply to remain true to the proposition that the distinction and the relationship of the two is a thoroughly contemporaneous one. But it is impossible to draw any fixed line between experimentation and scientific observa-

tions. To insist upon the need of systematic observation and collection of particulars is to set up a principle which is as distinct from the casual accumulation of impressions as it is from nebulous speculation. If there is to be observation of a directed sort, it must be with reference to some problem, some doubt, and this, as we have seen, is a stimulus which throws the mind into a certain attitude of response. Controlled observation is inquiry, it is search; consequently it must be search for something. Nature cannot answer interrogations excepting as such interrogations are put; and the putting of a question involves anticipation. The observer does not inquire about anything or look for anything excepting as he is after something. This search implies at once the incompleteness of the particular given facts, and the possibility—that is ideal—of their completion.

It was not long until the development of natural science compelled a better understanding of its actual procedure than Bacon possessed. Empiricism changed to experimentalism. With experimentalism inevitably came the recognition of hypotheses in observing, collecting, and comparing facts. It is clear, for instance,that Newton's fruitful investigations are not conducted in accordance with the Baconian notion. It is quite clear that his celebrated four rules for philosophizing[1] are in truth statements of certain principles which are to be observed in forming hypotheses. They imply that scientific technique had advanced to a point

[1]Newton's "Rules for Philosophizing" (*Principia*, Book III) are as follows:

Rule I. "No more causes of natural things are to be admitted than such as are both true, and sufficient to explain the phenomena of those things."

Rule II. "Natural effects of the same kind are to be referred as far as possible to the same causes."

Rule III. "Those qualities of bodies that can neither be increased nor diminished in intensity, and which are found to belong to all bodies within reach of our experiments are to be regarded as qualities of all bodies whatever."

Rule IV. "In experimental philosophy propositions collected by induction from phenomena are to be regarded either as accurately true or very nearly true notwithstanding any contrary hypothesis, till other phenomena occur, by which they are made more accurate, or are rendered subject to exceptions."

where hypotheses were such regular and indispensable factors that certain uniform conditions might be laid down for their use. The fourth rule in particular is a statement of the relative validity of hypothesis as such until there is ground for entertaining a contrary hypothesis.

The subsequent history of logical theory in England is conditioned upon its attempt to combine into one system the theories of empiristic logic with recognition of the procedure of experimental science. This attempt finds its culmination in the logic of John Stuart Mill. Of his interest in and fidelity to the actual procedure of experimental science, as he saw it, there can be no doubt. Of his good faith in concluding his *Introduction* with the words following there can be no doubt: "I can conscientiously affirm that no one proposition laid down in this work has been adopted for the sake of establishing, or with any reference for its fitness in being employed in establishing, preconceived opinions in any department of knowledge or of inquiry on which the speculative world is still undecided." Yet Mill was equally attached to the belief that ultimate reality, as it is for the human mind, is given in sensations, independent of ideas; and that all valid ideas are combinations and convenient ways of using such given material. Mill's very sincerity made it impossible that this belief should not determine, at every point, his treatment of the thinking process and of its various instrumentalities.

In Book III, chap. 14, Mill discusses the logic of explanation, and in discussing this topic naturally finds it necessary to consider the matter of the proper use of scientific hypotheses. This is conducted from the standpoint of their use as that is reflected in the technique of scientific discovery. In Book IV, chap. 2, he discusses "Abstraction or the Formation of Conceptions" — a topic which obviously involves the forming of hypotheses. In this chapter, his con-

sideration is conducted in terms, not of scientific procedure, but of general philosophical theory, and this point of view is emphasized by the fact that he is opposing a certain view of Dr. Whewell.

The contradiction between the statements in the two chapters will serve to bring out the two points already made, viz., the correspondent character of datum and hypothesis, and the origin of the latter in a problematic situation and its consequent use as an instrument of unification and solution. Mill first points out that hypotheses are invented to enable the deductive method to be applied earlier to phenomena; that it does this by suppressing the first of the three steps, induction, ratiocination, and verification. He states that:

> The process of tracing regularity in any complicated, and at first sight confused, set of appearances is necessarily tentative; we begin by making any supposition, even a false one, to see what consequences will follow from it; and by observing how these differ from the real phenomena, we learn what corrections to make in our assumption. . . . . *Neither induction nor deduction would enable us to understand even the simplest phenomena*, if we did not often commence by anticipating the results; by making a provisional supposition, at first essentially conjectural, as to some of the very notions which constitute the final object of the inquiry.[1]

If in addition we recognize that, according to Mill, our direct experience of nature always presents us with a complicated and confused set of appearances, we shall be in no doubt as to the importance of ideas as anticipations of a possible experience not yet had. Thus he says:

> The order of nature, as perceived at a first glance, presents at every instant a chaos followed by another chaos. We must decompose each chaos into single facts. We must learn to see in the chaotic antecedent a multitude of distinct antecedents, in the chaotic consequent a multitude of distinct consequents.[2]

[1] Book III, chap. 2, sec. 5; italics mine. The latter part of the passage, beginning with the words "If we did not often commence," etc., is quoted by Mill from Comte. The words "neither induction nor deduction would enable us to understand even the simplest phenomena" are his own.

[2] Book III, chap. 7, sec. 1.

In the next section of the same chapter he goes on to state that, having discriminated the various antecedents and consequents, we then "are to inquire which is connected with which." This requires a still further resolution of the complex and of the confused. To effect this we must vary the circumstances; we must modify the experience as given with reference to accomplishing our purpose. To accomplish this purpose we have recourse either to observation or to experiment: "We may either *find* an instance in nature *suited to our purposes*, or, by an artificial arrangement of circumstances, *make* one" (the italics in "suited to our purpose" are mine; the others are Mill's). He then goes on to say that there is no real logical distinction between observation and experimentation. The four methods of experimental inquiry are expressly discussed by Mill in terms of their worth in singling out and connecting the antecedents and consequents which actually belong together, from the chaos and confusion of direct experience.

We have only to take these statements in their logical connection with each other (and this connection runs through the entire treatment by Mill of scientific inquiry), to recognize the absolute necessity of hypothesis to undertaking any directed inquiry or scientific operation. Consequently we are not surprised at finding him saying that "the function of hypotheses is one which must be reckoned absolutely indispensable in science;" and again that "the hypothesis by suggesting observations and experiments puts us on the road to independent evidence."[1]

Since Mill's virtual retraction, from the theoretical point of view, of what is here said from the standpoint of scientific procedure, regarding the necessity of ideas is an accompaniment of his criticism of Whewell, it will put the discussion in better perspective if we turn first to Whewell's views.[2]

[1] Book III, chap. 14, secs. 4 and 5.

[2] WILLIAM WHEWELL, *The Philosophy of the Inductive Sciences*, London, 1840.

The latter began by stating a distinction which easily might have been developed into a theory of the relation of fact and idea which is in line with that advanced in this chapter, and indeed in this volume as a whole. He questions (chap. 2) the fixity of the distinction between theory and practice. He points out that what we term facts are in effect simply accepted inferences; and that what we call theories are describable as facts, in proportion as they become thoroughly established. A true theory is a fact. "All the great theories which have successively been established in the world are now thought of as facts." "The most recondite theories when firmly established are accepted as facts; the simplest facts seem to involve something of the nature of theory."

The conclusion is that the distinction is a historic one, depending upon the state of knowledge at the time, and upon the attitude of the individual. What is theory for one epoch, or for one inquirer in a given epoch, is fact for some other epoch, or even for some other more advanced inquirer in the same epoch. It is theory when the element of inference involved in judging any fact is consciously brought out; it is fact when the conditions are such that we have never been led to question the inference involved, or else, having questioned it, have so thoroughly examined into the inferential process that there is no need of holding it further before the mind, and it relapses into unconsciousness again. "If this greater or less consciousness of our own internal act be all that distinguishes fact from theory, we must allow that the distinction is still untenable" (untenable, that is to say, as a fixed separation). Again, "fact and theory have no essential difference except in the degree of their *certainty and familiarity.* Theory, when it becomes firmly established and steadily lodged in the mind becomes fact." (P. 45; italics mine.) And, of course, it is equally true that as fast as facts are suspected or doubted, certain aspects of them

are transferred into the class of theories and even of mere opinions.

I say this conception might have been developed in a way entirely congruous with the position of this chapter. This would have happened if the final distinction between fact and idea had been formulated upon the basis simply of the points, "relative certainty and familiarity." From this point of view the distinction between fact and idea is one purely relative to the doubt-inquiry function. It has to do with the evolution of an experience as regards its conscious surety. It has its origin in problematic situations. Whatever appears to us as a problem appears as contrasted with a possible solution. Whatever objects of thought refer particularly to the problematic side are theories, ideas, hypotheses; whatever relates to the solution side is surety, unquestioned familiarity, fact. This point of view makes the distinctions entirely relative to the exigencies of the process of reflective transformation of experience.

Whewell, however, had no sooner started in this train of thought than he turns his back upon it. In chap. 3 he transforms what he had proclaimed to be a relative, historic, and working distinction into a fixed and absolute one. He distinguishes between sensations and ideas, not upon a genetic basis with reference to establishing the conditions of further operation; but with reference to a fundamentally fixed line of demarkation between what is passively *given* to the mind and the *activity* put forth by the mind. Thus he reinstates in its most generalized and fixed, and therefore most vicious, form the separation which he has just rejected. Sensations are a brute unchangeable element of fact which exists and persists independent of ideas; an idea is a mode of mental operation which occurs and recurs in an independent individuality of its own. If he had carried out the line of thought with which he began, sensation as fact

would have been that residuum of familiarity and certainty which cannot be eliminated, however much else of an experience is dissolved in the inner conflict. Idea as hypothesis or theory would have been the corresponding element in experience which is necessary to redintegrate this residuum into a coherent and significant experience.

But since Whewell did not follow out his own line of thought, choosing rather to fall back on the Kantian antithesis of sense and thought, he had no sooner separated his fact and idea, his given datum and his mental relation, than he is compelled to get them together again. The idea becomes "a general relation which is imposed upon perception by an act of the mind, and which is different from anything which our senses directly offer to us" (p. 26). Such conceptions are necessary to connect the facts which we learn from our senses into truths. "The ideal conception which the mind itself supplies is superinduced upon the facts as they are originally presented to observation. Before the inductive truth is detected, the facts are there, but they are many and unconnected. The conception which the discoverer applies to them gives them connection and unity." (P. 42.) All induction, according to Whewell, thus depends upon superinduction — imposition upon sensory data of certain ideas or general relations existing independently in the mind.[1]

We do not need to present again the objections already offered to this view: the impossibility of any orderly stimulation of ideas by facts, and the impossibility of any check in the imposition of idea upon fact. "Facts" and conception are so thoroughly separate and independent that any sensory datum is indifferently and equally related to any conceivable idea. There is no basis for "superinducing"

[1] The essential similarity between Whewell's view and that of Lotze, already discussed (see chap. 3) is of course explainable on the basis of their common relationship to Kant.

one idea or hypothesis, rather than any other, upon any particular set of data.

In the chapter already referred to upon abstraction, or the formation of conceptions, Mill seizes upon this difficulty. Yet he and Whewell have one point in common: they both agree in the existence of a certain subject-matter which is given for logical purposes quite outside of the logical process itself. Mill agrees with Whewell in postulating a raw material of pure sensational data. In criticising Whewell's theory of superinduction of idea upon fact, he is therefore led to the opposite assertion of the complete dependence of ideas as such upon the given facts as such — in other words, he is led to a reiteration of the fundamental Baconian empiricism; and thus to a virtual retraction of what he had asserted regarding the necessity of ideas to fruitful scientific inquiry, whether in the way of observation or experimentation. The following quotation gives a fair notion of the extent of Mill's retraction:

> The conceptions then which we employ for the colligation and methodization of facts, do not develop themselves from within, *but are impressed upon the mind from without;* they are never obtained otherwise than by way of comparison and abstraction, and, in the most important and most numerous cases, are evolved by abstraction *from the very phenomena which it is their office to colligate.*[1]

Even here Mill's sense for the positive side of scientific inquiry suffices to reveal to him that the "facts" are somehow inadequate and defective, and are in need of assistance from ideas — and yet the ideas which are to help out the facts are to be the impress of the unsure facts! The contradiction comes out very clearly when Mill says: "The really difficult cases are those in which the conception destined to create light and order out of darkness and confu-

[1] *Logic*, Book IV, chap. 2, sec. 2; italics mine.

sion has to be sought for among the very phenomena which it afterward serves to arrange."[1]

Of course, there is a sense in which Mill's view is very much nearer the truth than is Whewell's. Mill at least sees that "idea" must be relevant to the facts or data which it is to arrange, which are to have "light and order" introduced into them by means of the idea. He sees clearly enough that this is impossible save as the idea develops *within* the same experience in which the "dark and confused" facts are presented. He goes on to show correctly enough how conflicting data lead the mind to a "confused feeling of an analogy" between the data of the confused experience and of some other experience which is orderly (or already colligated and methodized); and how this vague feeling, through processes of further exploration and comparison of experiences, gets a clearer and more adequate form until we finally accept it. He shows how in this process we continually judge of the worth of the idea which is in process of formation, by reference to its appropriateness to *our purpose.* He goes so far as to say: "The question of appropriateness is relative to the *particular object we have in view.*"[2] He sums up his discussion by stating: "We cannot frame good general conceptions beforehand. That the conception we have obtained is the one we want can only be known when we have *done the work for the sake of which we wanted it.*"[3]

This all describes the actual state of the case, but it is consistent only with a logical theory which makes the distinction between fact and hypothesis instrumental in the transformation of experience from a confused into an organized form; not with Mill's notion that sensations are somehow finally and completely given as ultimate facts, and

[1] *Ibid.*

[2] *Ibid.*, sec. 4; in sec. 6 he states even more expressly that any conception is appropriate in the degree in which it "helps us toward what we wish to understand."

[3] *Ibid.*, sec. 6; italics mine.

that ideas are mere re-registrations of such facts. It is perfectly just to say that the hypothesis is impressed upon the mind (in the sense that any notion which occurs to the mind is impressed) *in the course* of an experience. It is well enough, if one define what he means, to say that the hypothesis is impressed (that is to say, occurs or is suggested) through the medium of given facts, or even of sensations. But it is equally true that the *facts* are presented and that *sensations* occur within the course of an experience which is larger than the bare facts, because involving the conflicts among them and the corresponding intention to treat them in some fashion which will secure a unified experience. Facts get power to suggest ideas to the mind — to "impress" — only through their position in an entire experience which is in process of disintegration and of reconstruction — their "fringe" or feeling of tendency is quite as factual as they are. The fact that "the conception we have obtained is the one we want can be known only when we have done the work for the sake of which we wanted it," is enough to show that it is not bare facts, but facts in relation to want and purpose and purpose in relation to facts, which originate the hypothesis.

It would be interesting to follow the history of discussion of the hypothesis since the time of Whewell and of Mill, particularly in the writings of Jevons, Venn, and Bosanquet. This history would refine the terms of our discussion by introducing more complex distinctions and relations. But it would be found, I think, only to refine, not to introduce any fundamentally new principles. In each case, we find the writer struggling with the necessity of distinguishing between fact and idea; of giving the fact a certain primacy with respect to testing of idea and of giving the idea a primacy with respect to the significance and orderliness of the fact; and of holding throughout to a relationship of idea with

fact so intimate that the idea develops only by being "compared" with facts (that is, used in construing them), and facts get to be known only as they are "connected" through the idea — and we find that what is a maze of paradoxes and inconsistencies from an absolute, from a non-historic standpoint, is a matter of course the moment it is looked at from the standpoint of experience engaged in self-transformation of meaning through conflict and reconstitution.

But we can only note one or two points. Jevons's "infinite ballot-box" of nature which is absolutely neutral as to any particular conception or idea, and which accordingly requires as its correlate the formation of every possible hypothesis (all standing in themselves upon the same level of probability) is an interesting example of the logical consequences of feeling the need of both fact and hypothesis for scientific procedure and yet regarding them as somehow arising independently of each other. It is an attempt to combine extreme empiricism and extreme rationalism. The process of forming hypotheses and of deducing their rational consequences goes on at random, because the disconnectedness of facts as given is so ultimate that the facts suggest one hypothesis no more readily than another. Mathematics, in its two forms of measurements as applied to the facts, and of calculation as applied in deduction, furnishes Jevons the bridge by which he finally covers the gulf which he has first himself created. Venn's theory requires little or no restatement to bring it into line with the position taken in the text. He holds to the origin of hypothesis in the original practical needs of mankind, and to its gradual development into present scientific form.[1] He states expressly:

The *distinction between what is known and what is not known is essential to Logic*, and peculiarly characteristic of it in a degree not to be found in any other science. Inference is the

[1] VENN, *Empirical Logic*, p. 383.

process of passing from one to the other; from facts which we had accepted as premises, to those which we have not yet accepted, *but are in the act of doing so by the very process in question.* No scrutiny of the facts themselves, regarded as objective, can ever detect these characteristics of their greater or less familiarity to our minds. We must introduce also the subjective element if we wish to give any adequate explanation of them.[1]

Venn, however, does not attempt a thoroughgoing statement of logical distinctions, relations, and operations, as parts "of the act of passing from the unknown to the known." He recognizes the relation of reflection to a historic process, which we have here termed "reconstruction," and the origin and worth of hypothesis as a tool in the movement, but does not carry his analysis to a systematic form.

III

Origin of the hypothesis.— In our analysis of the process of judgment, we attempted to show that the predicate arises in case of failure of some line of activity going on in terms of an established habit. When the old habit is checked through failure to deal with new conditions (*i. e.*, when the situation is such as to stimulate two habits with distinct aims) the problem is to find a new method of response— that is, to co-ordinate the conflicting tendencies by building up a single aim which will function the existing situation. As we saw that, in case of judgment, habit when checked became ideal, an idea, so the new habit is first formalized as an ideal type of reaction and is the hypothesis by which we attempt to construe new data. In our inquiry as to how this formulation is effected, *i. e.*, how the hypothesis is developed, it will be convenient to take some of the currently accepted statements as to their origin, and show how these statements stand in reference to the analysis proposed.

[1] VENN, *Empirical Logic*, p. 25; italics mine.

Enumerative induction and allied processes.—It is pointed out by Welton[1] that the various ways in which hypotheses are suggested may be reduced to three classes, viz., enumerative induction, conversion of propositions, and analogy. Under the head of "enumeration" he reminds us that "every observed regularity of connection between phenomena suggests a question as to whether it is universal." There are numerous instances of this in mathematics. For example, it is noticed that $1+3=2^2$, $1+3+5=3^2$, $1+3+5+7=4^2$, etc.; and one is led to ask whether there is any general principle involved, so that the sum of the first n odd numbers will be n^2, where n is any number, however great. In this early form of inductive inference there are two divergent tendencies. One is the tendency to complete enumeration. This *tendency* is clearly ideal—it transcends the facts as given. To look for all the cases is thus itself an experimental inquiry, based upon a hypothesis which it endeavors to test. But in most cases enumeration can be only incomplete, and we are able to reach nothing better than probability. Hence the other tendency in the direction of an analysis of content in search for a principle of connection in the elements in any *one* case. For if a characteristic belonging to a number of individuals suggests a class where it belongs to all individuals, it must be that it is found in every individual as such. The hypothesis of complete class involves a hypothesis as to the character of each individual in the class. Thus a hypothesis as to extension transforms itself into one as to intension.

But it is analogy which Welton considers "the chief source from which new hypotheses are drawn." In the second tendency mentioned under enumerative induction, that is, the tendency to analysis of content or intension, we are naturally led to analogy, for in our search for the char-

[1] WELTON, *Manual of Logic*, Vol. II, chap. 3.

acteristic feature which determines classification among the concrete particulars our first step will be an inference by analogy. In analogy attention is turned from the number of observed instances to their character, and, because particulars have some feature in common, they are supposed to be the same in still other respects. While the best we can reach in analogy is probability, the arguments may be such as to result in a high degree of certainty. The form of the argument is valuable in so far as we are able to distinguish between essential and nonessential characteristics on which to base our analogy. What is essential and what nonessential depends upon the particular end we have in view.

In addition to enumerative induction, which Welton has mentioned, it is to be noted that there are a number of other processes which are very similar to it in that a number of particulars appear to furnish a basis for a general principle or method. Such instances are common in induction, in instruction, and in methods of proof.

If one is to be instructed in some new kind of labor, he is supposed to acquire a grasp of the method after having been shown in a few instances how this particular work is to be done; and, if he performs the manipulations himself, so much the better. It is not asked why the experience of a few cases should be of any assistance, for it seems self-evident that an experienced man, a man who has acquired the skill, or knack, of doing things, should deal better with all other cases of similar nature.

There is something very similar in inductive proofs, as they are called. The inductive proof is common in algebra. Suppose we are concerned in proving the law of expansion of the binomial theorem. We show by actual calculation that, if the law holds good for the nth power, it is true for the $n+$ first power. That is, if it holds for any power, it holds for the next also. But we can easily show that it does

hold for, say, the second power. Then it must be true for the third, and hence for the fourth, and so on. Whether this law, though discovered by inductive processes, depends on deduction for the conclusiveness of its proof, as Jevons holds;[1] whether, as Erdmann[2] contends, the proof is thoroughly deductive; or whether Wundt[3] is right in maintaining that it is based on an exact analogy, while the fundamental axioms of mathematics are inductive, it is clear that in such proofs a few instances are employed to give the learner a start in the right direction. Something suggests itself, and is found true in this case, in the next, and again in the next, and so on. It may be questioned whether there is usually a very clear notion of what is involved in the "so on." To many it appears to mark the point where, after having been taken a few steps, the learner is carried on by the acquired momentum somewhat after the fashion of one of Newton's laws of motion. Whether the few successive steps are an integral part of the proof or merely serve as illustration, they are very generally resorted to. In fact, they are often employed where there is no attempt to introduce a general term such as n, or k, or l, but the few individual instances are deemed quite sufficient. Such, for instance, is the custom in arithmetical processes. We call attention to these facts in order to show that successive cases are utilized in the course of explanation as an aid in establishing the generality of a law.

In geometry we find a class of proofs in which the successive steps seem to have great significance. A common proof of the area of the circle will serve as a fair example. A regular polygon is circumscribed about the circle. Then as the number of its sides are increased its area will approach

[1] W. S. JEVONS, *Principles of Science*, pp. 231, 232.

[2] B. ERDMANN, "Zur Theorie des Syllogismus und der Induktion," *Philosophische Abhandlungen*, Vol. VI, p. 230.

[3] WUNDT, *Logik*, 2d ed., Vol. II, p. 131.

that of the circle, as its perimeter approaches the circumference of the circle. The area of the circle is thus inferred to be πR^2, since the area of the polygon is always $\frac{1}{2}R \times$ perimeter, and in case of the circle the circumference $= 2\pi R$. Here again we get under such headway by means of the polygon that we arrive at the circle with but little difficulty. Had we attempted the transition at once, say, from a circumscribed square, we should doubtless have experienced some uncertainty and might have recoiled from what would seem a rash attempt; but as the number of the sides of our polygon approach infinity—that mysterious realm where many paradoxical things become possible—the transition becomes so easy that our polygon is often said to have truly become a circle.

Similarly, some statements of the infinitesimal calculus rest on the assumption that slight degrees of difference may be neglected. Though the more modern theory of limits has largely displaced this attitude in calculus and has also changed the method of proof in such geometrical problems as the area of the circle, the underlying motive seems to have been to make transitions easy, and thus to make possible a continued application of some particular method or way of dealing with things.

But granted that this is all true, what has it to do with the origin of the hypothesis? It seems likely that the hypothesis may be suggested by a few successive instances; but are these to be classed with the successive steps in proof to which we have referred? In the first place, we attempt to prove our hypothesis because we are not sure it is true; we are not satisfied that there are no other tenable hypotheses. But if we do test it, is not such test enough? It depends upon how thorough a grasp we have of the situation; but, in general, each test case adds to its probability. The value of tests lies in the fact that they strengthen and

tend to confirm our hypothesis by checking the force of alternatives. One instance is not sufficient because there are other possible incipient hypotheses, or more properly tendencies, and the enumeration serves to bring one of these tendencies into prominence in that it diminishes other vague and perhaps subconscious tendencies and strengthens the one which suddenly appears as the mysterious product of genius.

The question might arise why the mere repetition of conflicting tendencies would lead to a predominance of one of them. Why would they not all remain in conflict and continue to check any positive result? It is probably because there never is any absolute equilibrium. The successive instances tend to intensify and bring into prominence some tendency which is already taking a lead, so to speak. And it may be said further in this connection that only as seen from the outside, only as a mechanical view is taken, does there appear to be an excluding of definitely made out alternatives.

In explanation of the part played by analogy in the origin of hypotheses, Welton points out that a mere number of instances do not take us very far, and that there must be some "*specification* of the instances as well as numbering of them," and goes on to show that the argument by enumerative induction passes readily into one from analogy, as soon as attention is turned from the number of the observed instances to their character. It is not necessary, however, to pass to analogy through enumerative induction. "When the instances presented to observation offer immediately the characteristic marks on which we base the inference to the connection of S and P, we can proceed at once to an inference from analogy, without any preliminary enumeration of the instances."[1]

[1] WELTON, *Manual of Logic*, Vol. II, p. 72.

Welton, and logicians generally, regard analogy as an inference on the basis of partial identity. Because of certain common features we are led to infer a still greater likeness.

Both enumerative induction and analogy are explicable in terms of habit. We saw in our examination of enumerative induction that a form of reaction gains strength through a series of successful applications. Analogy marks the presence of an identical element together with the tendency to extend this "partial identity" (as it is commonly called) still farther. In other words, in analogy it is suggested that a type of reaction which is the same in certain respects may be made similar in a greater degree. In enumerative induction we lay stress on the number of instances in which the habit is applied. In analogy we emphasize the content side and take note of the partial identity. In fact, the relation between enumerative induction and analogy is of the same sort as that existing between association by contiguity and association by similarity. In association by contiguity we think of the things associated as merely standing in certain temporal or spatial relations, and disregard the fact that they were elements in a larger experience. In case of association by similarity we regard the like feature in the things associated as a basis for further correction.

In conversion of propositions we try to reverse the direction of the reaction, so to speak, and thereby to free the habit, to get a mode of response so generalized as to act with a minimum cue. For instance, we can deal with A in a way called B, or, in other words, in the same way that we did with other things called B. If we say, "Man is an animal," then to a certain extent the term "animal" signifies the way in which we regard "man." But the question arises whether we can regard all animals as we do man. Evidently not, for the reaction which is fitting in

case of animals would be only partially applicable to man. With the animals that are also men we have the beginning of a habit which, if unchecked, would lead to a similar reaction toward all animals, *i. e.*, we would say: "All animals are men." Man may be said to be the richer concept, in that only a part of the reaction which determines an object to be a man is required to designate it as an animal. On the other hand, if we start with animal, then (except in case of the animals which are men) there is lacking the subject-matter which would permit the fuller concept to be applied. By supplying the conditions under which animal = man we get a reversible habit. The equation of technical science has just this character. It represents the maximum freeing or abstraction of a predicate *qua* predicate, and thereby multiplies the possible applications of it to subjects of future judgments, and lessens the amount of shearing away of irrelevancies and of re-adaptation necessary when so used in any particular case.

Formation and test of the hypothesis.—The formation of the hypothesis is commonly regarded as essentially different from the process of testing, which it subsequently undergoes. We are said to observe facts, invent hypotheses, and *then* test them. The hypothesis is not required for our preliminary observations; and some writers, regarding the hypothesis as a formulation which requires a difficult and elaborate test, decline to admit as hypotheses those more simple suppositions, which are readily confirmed or rejected. A very good illustration of this point of view is met with in Wundt's discussion of the hypothesis, by an examination of which we hope to show that such distinctions are rather artificial than real.

The subject-matter of science, says Wundt,[1] is constituted by that which is actually given and that which is actually to

[1] *Op. cit.*, Vol. I, p. 452 ff.

be expected. The whole content is not limited to this, however, for these facts must be supplemented by certain presuppositions, which are not given in a factual sense. Such presuppositions are called hypotheses and are justified by our fundamental demand for unity. However valuable the hypothesis may be when rightly used, there is constant danger of illegitimately extending it by additions that spring from mere inclinations of fancy. Furthermore, the hypothesis in this proper scientific sense must be carefully distinguished from the various inaccurate uses, which are prevalent. For instance, hypotheses must not be confused with expectations of fact. As cases in point Wundt mentions Galileo's suppositions that small vibrations of the pendulum are isochronous, and that the space traversed by a falling body is proportional to the square of the time it has been falling. It is true that such anticipations play an important part in science, but so long as they relate to the facts themselves or to their connections, and can be confirmed or rejected any moment through observation, they should not be classed with those added presuppositions which are used to co-ordinate facts. Hence not all suppositions are hypotheses. On the other hand, not every hypothesis can be actually experienced. For example, one employs in physics the hypothesis of electric fluid, but does not expect actually to meet with it. In many cases, however, the hypothesis becomes proved as an experienced fact. Such was the course of the Copernican theory, which was at first only a hypothesis, but was transformed into fact through the evidence afforded by subsequent astronomical observation.

Wundt defines a theory as a hypothesis taken together with the facts for whose elucidation it was invented. In thus establishing a connection between the facts which the hypothesis merely suggested, the theory furnishes at the

same time partly the foundation (*Begründung*) and partly the confirmation (*Bestätigung*) of the hypothesis.[1] These aspects, Wundt insists, must be sharply distinguished. Every hypothesis must have its *Begründung*, but there can be *Bestätigung* only in so far as the hypothesis contains elements which are accessible to actual processes of verification. In most cases verification is attainable in only certain elements of the hypothesis. For example, Newton was obliged to limit himself to one instance in the verification of his theory of gravitation, viz., the movements of the moon. The other heavenly bodies afforded nothing better than a foundation in that the supposition that gravity decreases as the square of the distance increases enabled him to deduce the movements of the planets. The main object of his theory, however, lay in the deduction of these movements and not in the proof of universal gravity. With the Darwinian theory, on the contrary, the main interest is in seeking its verification through examination of actual cases of development. Thus, while the Newtonian and the greater part of the other physical theories lead to a deduction of the facts from the hypotheses, which can be verified only in individual instances, the Darwinian theory is concerned in evolving as far as possible the hypothesis out of the facts.

Let us look more closely at Wundt's position. We will ask, first, whether the distinction between hypotheses and expectations is as pronounced as he maintains; and, second, whether the relation between *Begründung* and *Bestätigung* may not be closer than Wundt would have us believe.

As examples of the hypothesis Wundt mentions the Copernican hypothesis, Newton's hypothesis of gravitation, and the predictions of the astronomers which led to the discovery of Neptune. As examples of mere expectations we

[1] *Op. cit.*, Vol. I, pp. 454-461.

are referred to Galileo's experiments with falling bodies and pendulums. In case of Newton's hypothesis there was the assumption of a general law, which was verified after much labor and delay. The heliocentric hypothesis of Copernicus, which was invented for the purpose of bringing system and unity into the movements of the planets, has also been fairly well substantiated. In the discovery of Neptune we have, apparently, not the proof of a general law or the discovery of further peculiarities of previously known data, but rather the discovery of a new object or agent by means of its observed effects. In each of these instances we admit that the hypothesis was not readily suggested or easily and directly tested.

If we turn to Galileo's pendulum and falling bodies, it is clear first of all that he did not have in mind the discovery of some object, as was the case in the discovery of Neptune. Did he, then, either contribute to the proof of a general law or discover further characteristics of things already known in a more general way? Wundt tells us that Galileo only determined a little more exactly what he already knew, and that he did this with but little labor or delay.

What, then, is the real difference between hypothesis and expectation? If we compare Galileo's determination of the law of falling bodies with Newton's test of his hypothesis of gravitation, we see that both expectation and hypothesis were founded on observation and took the form of mathematical formulæ. Each tended to confirm the general law expressed in its formula, though there was, of course, much difference in the time and labor required. If we compare the Copernican hypothesis with Galileo's supposition concerning the pendulum, we find again that they agree in regard to general purpose and method, and differ in the difficulty of verification. If the experiment with the pendulum only substituted exactness for inexactness, did the

Copernican theory do anything different in *kind?* It is true that the more exact statement of the swing of the pendulum was expressed in quantitative form, but quantitative statement is no criterion of either the presence or the absence of the hypothesis.

Again, we may compare the pendulum with Kepler's laws. What was Kepler's hypothesis, that the square of the periodic times of the several planets are proportional to the cubes of their mean distances from the sun, except a more exact formulation of facts which were already known in a more general way? Wundt's position seems to be this: whenever a supposition or suggestion can be tested readily, it should not be classed as a hypothesis. This would make the distinction one of degree rather than kind, and it does not appear how much labor we must expend, or how long our supposition must evade our efforts to test it, before it can win the title of hypothesis.

In the second place, we have seen that Wundt draws a sharp line between *Begründung* and *Bestätigung.* It is doubtless true that every hypothesis requires a certain justification, for unless other facts can be found which agree with deductions made in accordance with it, its only support would be the data from which it is drawn. Such support as this would be obtained through a process too clearly circular to be seriously entertained. The distinction which Wundt draws between *Begründung* and *Bestätigung* is evidently due to the presence of the experimental element in the latter. For descriptive purposes this distinction is useful, but is misleading if it is understood to mean that there is mere experience in one case and mere inference in the other. The difference is rather due to the relative parts played by inference and by accepted experience in each. In *Begründung* the inferential feature is the more prominent, while in *Bestätigung* the main emphasis is on the experiential aspect.

It must not be supposed, however, that either of these aspects can be wholly absent. It is difficult to understand how any hypothesis can be entertained at all unless it meets in some measure the demand with reference to which it was invented, viz., a unification of conflicts in experience. And, *in so far*, it is confirmed. The motive which casts doubt upon its adequacy is the same that leads to its re-forming as a hypothesis, as a mental concept.

The difficulties in Wundt's position are thus due to a failure to take account of the reconstructive nature of the judgment. The predicate, supposition, or hypothesis, whatever we may choose to call it, is formed because of the check of a former habit. The judgment is an ideal application of a new habit, and its test is the attempt to act in accordance with this ideal reconstruction. It must not be thought, however, that our supposition is first fully developed and then tried and accepted or rejected without modification. On the contrary, its growth is the result of successive minor tests and corresponding minor modifications in its form. Formation and test are merely convenient distinctions in a larger process in which forming, testing, and *re*-forming go on together. The activity of experimental verification is not only a testing, a confirming or weakening of the validity of a hypothesis, but it is equally well an evolution of the *meaning* of the hypothesis through bringing it into closer relations with specific data not previously included in defining its import. *Per contra*, a purely reflective and deductive consideration which develops the idea as hypothesis, *in so far* as it introduces the determinateness of previously accepted facts within the scope, comprehension, or intension of the idea, is in so far forth, a verification.

If the view which we have maintained is correct, the hypothesis is not to be limited to those elaborate formulations of the scientist which he seeks to confirm by crucial tests. The

hypothesis of the investigator differs from the comparatively rough conjecture of the plain man only in its greater precision. Indeed, as we have attempted to show, the hypothesis is not a method which we may employ or not as we choose; on the contrary, as predicate of the judgment it is present in a more or less explicit form if we judge at all. Whether the time and labor required for its confirmation or rejection is a matter of a lifetime or a moment, its nature remains the same. Its function is identical with that of the predicate. In short, the hypothesis *is* the predicate so brought to consciousness and defined that those features which are not noticed in the ordinary judgment are brought into prominence. We then recognize the hypothesis to be what in fact the predicate always is, viz., a method of organization and control.

VIII

IMAGE AND IDEA IN LOGIC

The logic of sense-impressions and of ideas as copies of sense-impressions has had its day. It engaged in a conflict with dogmatism, and scored a decisive victory. It overthrew the dynasty of prescribed formulæ and innate ideas, of ideas derived ready-made from custom and social usage, ancient enough to be lost in the remote obscurity of divine sources; and enthroned in their place ideas derived from, and representative of, the sense-experiences of a very real and present world. It marked a reaction from dogma back to the original meaning of dogma, back to the seeming, the appearance, of things. So thoroughly did Bacon and Hobbes, Locke and Hume, to mention only these four, do their work, that many of the problems growing out of the conflict itself, to say nothing of the scholastic traditions that were combated, have come to have merely a historical rather than a logical interest. Logic no longer concerns itself very eagerly with the content or sensuous qualities of ideas, with their derivation from sense-impressions, or with questions as to the relation of copy to original, of representative to that which is presented. It is concerned rather with the constructive operations of thought, with meaning, reference to reality, inference—with intellectual processes. Perhaps in no respect is this shifting of logical standpoint indicated more clearly than in the unregretful way with which the old logical interest in the sense-qualities of ideas is now made over to psychology. States of consciousness as such, we are told, are the proper study of psychology; whereas logic concerns itself with the relation of thought to its object. True,

these states of consciousness include thought-states, as well as sense-impressions; ideas and concepts, as well as feelings and fancies; and the business of psychology is to observe, compare and classify, describe and chronicle, these states and whatever else is carried along in the stream of consciousness. But logic is concerned, not with these states of consciousness *per se*, least of all with the flotsam and jetsam of the stream, but with its reference to reality; not with the true, but with truth; not even with what consciousness does, but with how consciousness is to outdo itself, transcend itself, in a rational and universal whole. Even an empirical logic has to arrange somehow the way to get from one sense-impression to another.

In drawing this distinction between logic and psychology —a distinction which virtually amounts to a separation—two things are overlooked: first, that the distinction itself is a logical distinction, and may properly constitute a problem falling under the province of logical inquiry and theory; and, second, that the rather arbitrary and official setting apart of psychology to look after the task of studying states of consciousness does not carry with it the guarantee that psychology will confine itself exclusively to that task. This last point in particular must be my excuse for discussing the question of image and idea from the psychological rather than from the logical standpoint. The logic of ideas derived from sense-impressions has had its day. But even the very leavings of the past may have been gathered up and reconstructed by psychology in such a way as to anticipate some of the newer developments of logical theory and meet some of its difficulties. One can hardly hope to justify in advance a discussion based on such a sheer possibility. Let us begin, rather, by noting down from the standpoint of logic some of the distinctions between image and idea, and the estimate of the logical function and value of mental imagery, and see

in what direction they take us and whether they suggest a resort to an analysis from the standpoint of psychology.

Proceeding from the standpoint of logic to inquire into the logical function of mental imagery and into the distinction between image and idea, we shall come upon two opposed but characteristic answers. If the inquiry be directed to a member of the empirical school of logic, he would be bound to answer in the affirmative, so far as the question regarding the function of mental imagery is concerned. He would be likely to say, if he were loyal to the traditions of his school, that mental imagery is the counterpart of sense-perception, and is thus the representative of the data with which empirical logic is concerned. Mental imagery, he would continue, is a representative in a literal sense, a copy, a reflection, of what comes to us through the avenues of sensation. True, it is not the perfect twin of sense-experience; else we could not tell them apart; indeed, there are times when the copy becomes so much like the original that we are deceived by it, as in dreams or in hallucinations. Ordinarily, however, we are able to distinguish one from the other. Two criteria are usually present; (1) imagery is fainter, more fleeting, than the corresponding sense-experience; and (2), save in the case of accurate memory-images, it is subject to a more or less arbitrary rearrangement of its parts, as when, for example, we make over the images of scenes we have actually experienced, to furnish forth the setting of some remote historical event.

Barring, or controlling and rectifying, its tendencies toward both arbitrary and constructive variations from the original, mental imagery is on the same level as sense-experience, and serves the same logical purpose. That is to say, it contributes to the data which constitute the foundations of empirical logic. It furnishes materials for the operations of observing, comparing, abstracting

and generalizing. Mental imagery helps to piece out the fragments that may be presented to sense-experience. It supplies the entire anatomy when only a single bone, say, is actually given. Yet, however useful as a servant of truth, it has to be carefully watched, lest its spontaneous tendency to vary the actual order and coexistence of data lead the investigator astray. The copy it presents is, after all, a temporary makeshift, until it can be shown to correspond point for point to the now absent reality. Mental imagery furnishes one with an illustrated edition of the book of nature, but the illustrations await the confirmation of comparison with the originals.

Mental imagery functions logically when it extends the area of data beyond the range of the immediate sense-perceptions of any given time, and thus makes possible a more comprehensive application of the empirical methods of observation, comparison, abstraction, and generalization. It functions logically when it acts as a feeder of logical machinery, though it is not indispensable to this machinery and does not modify its principles. The logical mill could grind up in the same way the pure grain of sense-perceptions, unmixed with mental images, but it would have to grind more slowly for lack of material. In other words, empirical logic could carry on its operations of observing, comparing, abstracting, and generalizing, solely on the basis of objects or data present to the senses, and with no extension of this basis in terms of imagery, or copies of objects not immediately present; but it would take more time for it to apply and carry through its operations. The logical machinery is the same in each case. The materials fed and the product issuing are the same in each case. Imagery simply fulfils the function of providing a more copious grist.

The empiricist's answer to our question regarding the logical function of mental imagery leaves that function in an

uncertain and parlous state. Imagery lacks the security of sense-perception on the one hand, and it has no part in the operation of thought on the other. It is a sort of hod-carrier, whose function it is to convey the raw materials of sense-perception to a more exalted position where someone else does all the work. I suppose this could be called a functional interpretation of a logical element. The question, then, would be whether an element so functioning is in any sense logical. As an element lying outside of the thought-process it owes no responsibility to logic; it is not amenable to its regulations. Thought simply finds it expedient to operate with an agent over which it has no intrinsic control. The case might be allowed to rest here. Yet were this extra-logical element of imagery to abandon thought, all conscious thinking as opposed to sense-perception would cease. A false alarm, perhaps. Imagery may be so constituted that it is inseparably subordinated to thought and can never abandon it. Thought may simply exude imagery. But imagery somehow has to represent sense-perception, also. It can hardly be a secretion of thought and a copy of sense-perceptions at one and the same time, unless the empiricist is willing to turn absolute idealist! Before taking such a desperate plunge as this, it might be desirable to see whether there is any other recourse.

There is another and a very different answer to the question regarding the logical function of mental imagery. To distinguish this answer from that of the associationist or empiricist, I will call it the answer of the conceptualist. I am not at all positive that this label would stick even to those to whom it might be applied with considerable justification. The terms "rationalistic" and "transcendental" might be preferred in opposition to the term "empirical." And we have the term "apperceptionist" in opposition to the term "associationist." If the term "conceptualist" is

admissible, it should be brought down to date, perhaps, by making it "neo-conceptualist." The present difficulties regarding terminology would be eased considerably if we only had a convenient set of derivatives made from the word "meaning." Since we have not, I will use derivatives made from the word "concept" to denote views opposite to those held by the empirical school.

The conceptualist could be depended upon to answer our question in the negative. Logical functions begin where the image leaves off. They begin with the *idea*, with meaning. The conceptualist distinguishes sharply between the image as a psychical existence and the idea, or concept, as logical meaning. On the one hand, you have the "image," not only as a mere psychical existence, but a mocking existence at that, fleeting, inconstant, shifting, never perhaps twice alike; yet, mind you, an *existence*, a *fact*—that must be admitted. On the other hand, you have the "idea," with "a fixed content or logical meaning,"[1] which is referred by an act of judgment to a reality beyond the act.[2]

The "idea," the logical meaning, begins where the "image" leaves off. Does this mean that the "idea" is wholly independent of the "image"? Yes and no. The "idea" is independent of that which is ordinarily regarded as the special characteristic of an "image," namely, its quality, its sense-content. That is to say, the "idea" is independent of any particular "image," any special embodiment of sense-content. Any image will do. As Mr. Bosanquet remarks in comparing the psychical images that pass through our minds to a store of signal flags:

> Not only is it indifferent whether your signal flag of today is the same bit of cloth that you hoisted yesterday, but also, no one knows or cares whether it is clean or dirty, thick or thin, frayed or

[1] BOSANQUET, *Logic*, Vol. I, p. 46.

[2] BRADLEY, *Principles of Logic*, p. 10.

smooth, as long as it is distinctly legible as an element of the signal code. Part of its content, of its attributes and relations, is a fixed index which carries a distinct reference; all the rest is nothing to us, and, except in a moment of idle curiosity, we are unaware that it exists.[1]

On the other hand, the "idea" could not operate as an idea, could not be in consciousness, save as it involves some imagery, however old, dirty, thin, and frayed. Take the statement, "The angles of a triangle are equal to two right angles." If the statement means anything to a given individual, if it conveys an idea, it must necessarily involve some form of imagery, some qualitative or conscious content. But so far as the *meaning* is concerned, it is a matter of complete indifference as to *what* qualities are involved. These qualities may be in terms of visual, auditory, tactual, kinæsthetic, or verbal imagery. The individual may visualize a blackboard drawing of a triangle with its sides produced, or he may imagine himself to be generating a triangle while revolving through an angle of 180°. Any imagery anyone pleases may be employed, so long as there goes with it somehow the *idea* of the relation of equality between the angles of a triangle and two right angles. But the conceptualist does not stop here. The act of judgment comes in to affirm that the "idea" is no mere idea, but is a quality of the real. "The act [of judgment] attaches the floating adjective [the idea, the logical meaning] to the nature of the world, and, at the same time, tells one it was there already."[2] The "idea," the logical meaning, begins where the "image" leaves off. Yet, somehow, the "idea" could not begin, unless there were an "image" to leave off.

An "image" is not an "idea," says the conceptualist. An "idea" is not an "image." (1) An "image" is not an "idea," because an "image" is a particular, individual frag-

[1] *Op. cit.*, Vol. I, p. 74.

[2] BRADLEY, *Principles of Logic*, p. 11.

ment of consciousness. It is so bound up with its own existence that it cannot reach out to the existence of an "idea," or to anything beyond itself. Chemically speaking, it is an *avalent* atom of consciousness, if such a thing is thinkable. Mr. Bosanquet raises the question:

> Are there at all ideas which are not symbolic? . . . . The answer is that (*a*) in judgment itself the idea can be distinguished *qua* particular in time or psychical fact, and *so far* is not symbolic; and (*b*) in all those human experiences from which we draw our conjectures as to the animal intelligence, when in languor or in ignorance image succeeds image without conscious judgment, we feel what it is to have ideas as facts and not as symbols.[1]

(2) An "idea" is not an "image," because an idea *is* meaning, which consists in a part of the content of the image, cut off, and considered apart from the *existence* of the content or sign itself.[2] This meaning, this fragment of psychical existence, lays down all claim to existence on its own account, that it may refer through an act of judgment to a reality beyond itself and beyond the act also. An "image" is not an "idea" and an "idea" is not an "image," because an "image" exists only as a quality, a sense-content, whereas an "idea" exists only as a relation, a reference to reality beyond. "On the one hand," to recall Bradley's antinomy, "no possible idea [as a psychical image] can be that which it means. . . . . On the other hand, no idea [as logical signification] is anything but just what it means."

There is a significant point of agreement between the conceptualist and the empiricist. Both regard imagery as on the level with sense-perception. For the empiricist, as we have seen, the fact that imagery may be compelled to serve as a yoke-fellow of sense-experience constitutes its logical value. For the conceptualist, however, the associa-

[1] *Op. cit.*, Vol. I, pp. 75, 76. [2] BRADLEY, *op. cit.*, pp. 4–6.

tion of imagery with sense-experience is of no logical consequence whatsoever, save as it may help to intensify the distinction between imagery and meaning. To quote again from Bradley:

> For logical purposes the psychological distinction of idea and sensation may be said to be irrelevant, while the distinction of idea and fact is vital. The image, or psychological idea, is for logic nothing but a sensible reality. It is on a level with the mere sensations of the senses. For both are facts and neither are meanings. Neither are cut from a mutilated presentation and fixed as a connection. Neither are indifferent to their place in the stream of psychical events, their time and their relations to the presented congeries. Neither are adjectives to be referred from their existence, to live on strange soils, under other skies, and through changing seasons. The lives of both are so entangled with their environment, so one with their setting of sensuous particulars, that their character is destroyed if but one thread is broken.[1]

This point of agreement between conceptualism and empiricism, this placing of imagery and sense-experience on a common level, serves to bring into relief fundamental differences between the two schools of thought; fundamental, because they have to do with the nature of reality itself. The conceptualist in his zealous endeavor to distinguish between imagery and logical meaning has come perilously near driving imagery into the arms of reality. It is the opportunity of empiricism to make them one. How can conceptualism prevent the union? Has it not disarmed itself? The act of judgment, which includes within itself logical meaning as predicate, refers to a reality beyond the act. Both imagery and reality, then, lie outside of the act of judgment! What alliance, or *mésalliance*, may they not form, one with the other?

The difficulties we have noted thus far in the discussion are due to a large extent, I believe, to incomplete psychologi-

[1] *Op. cit.*, pp. 7, 8.

cal analysis of logical machinery. The empiricist has not carried the psychology of logic as far as the conceptualist, although the latter might be the loudest to disclaim the honor. I will not try to prove this statement, but simply give it as a reason why, in the interest of brevity, I shall pass with little comment over the psychological shortcomings and contributions of empirical logic, and devote what space remains to the psychology implicitly worked out by conceptual logic, and to its possible development, with special reference, of course, to the problem of the logical function of imagery.

The logical distinction, which practically amounts to a separation between imagery and meaning, is the counterpart of the psychological distinction between stimulus and response, between the two poles of sensori-motor activity, where the stimulus is defined in consciousness in the form of imagery, in the form of sense-qualities centrally excited, and where the response is directed and controlled *via* this imagery, so as to function in bringing some end, project, purpose, or ideal, nearer to realization, some problem nearer to solution.

Psychologically, there is no break between image and response, between thought and action. The stimulus is a condition of action, in both senses of the ambiguity of the word "condition." (1) It *is* action; it is a state or condition of action. (2) It is also an initiation of action. *If* the appropriate stimulus, then the desired action. The response to an image is the meaning of the image. Or, the response to any stimulus *via* an image—mediated, controlled or directed by an image—is the meaning of that image. The less imagery involved in any response, the greater the presumption in favor of the belief that the response is either an instinctive impulse or else has become a habit of mind, an adequate idea. The reduction and loss of sense-content which an image may undergo—the wearing away of an

image, it is sometimes called—is not a sign that this sense-content has no logical function; but rather that it has fulfilled a logical function so well that it has made part of itself useless. The husk, to recall one of Mr. Bradley's comparisons, that useless husk, tends to fall away, to lapse from consciousness, after it has served the purpose of helping to bring the kernel of truth to fruition.

This raises again the original question as to whether the sense-content, the quality, the existential quality, of an image has a logical function. I will ask first whether it has a function from the standpoint of psychology. We will agree with the empiricist that the content of an image is representative, that it is a return, a revival, of a sense-content previously experienced through the activity of sense-organs stimulated from the periphery. What is the function, then, of the representative image? Sensation, quality, as we have implied above, is the stimulus come to consciousness. To explain how a stimulus can "come" to consciousness is a problem I will not attempt to go into here. I assume as a fact that there are times when we know what we are about; when we are conscious of the stimuli, or conditions of action, which are tending in this direction or in that, and when through this consciousness we exercise a controlling influence over action by selecting and reinforcing certain stimuli and suppressing or inhibiting others. It is true that we do not always realize to how great an extent our actions are controlled by stimuli which do not come to consciousness, by reflexes, instincts, and habits which do not rise above the threshold of imagery. And when this vast complex of hidden machinery is partly revealed to us, it may either cause the beholder to take a materialistic, mechanical, or fatalistic view of existence, to say that we are the victims of our own machinery, or else it may induce the other extreme of more or less mystic pronouncements regarding the province of the

subconscious, of the subliminal self; thus out of partial views, out of half-truths, metaphysical problems arise and arm for mutual conflict. Nevertheless, there is a presumption, amounting in most minds to a conviction, that we do at times consciously control some of our actions. And it is only making this conviction a little more explicit to say that we consciously control our actions through becoming aware of the stimuli, or conditions of action, and through selecting and reinforcing them.

Is it begging the question to speak of consciousness as exercising a selective function with reference to stimuli? From the standpoint of psychology, I cannot see that it is. No characteristic of consciousness has been more clearly made out, both reflectively and experimentally, than its selective function, than its ability to pick out and intensify within certain limits the stimuli or conditions of action.

The representational image is a stimulus come to consciousness in the same way that a sensation is a stimulus come to consciousness. It is both a direct and an indirect stimulus. The terms "direct" and "indirect" are used as relative solely to the demands of the particular situation out of which they arise. By direct stimulus I mean a stimulus which initiates with almost no appreciable delay the response or attitude appropriate to the demands of a given situation, bridging the difficulties, removing the obstacles, or solving the problem with the minimum of conscious reflection. As an image becomes more and more of a working symbol, an idea, it tends to become simply a direct stimulus.

By an "indirect stimulus" is meant a stimulus initiating a response which, if not inhibited, would be irrelevant to the situation, yet which may represent stimuli which are not found in the immediate field of sense-perception, and which are essential to the carrying on of the activity. The situation is a problematic one. Acquired habits or mental

adjustments break down at some point or fail to operate smoothly, either owing to the absence of customary stimuli or to the presence of new and untried conditions of action. Part of the stress of meeting such a situation as this falls on the side of discovering appropriate stimuli and part on the side of developing out of habits already acquired new methods of response.

In such a situation as this, imagery may function on the side of *stimulus* when, taking its cue from the stimuli which are actually present, and which grow out of the strain and friction, it represents the missing conditions of action sufficiently to direct a search for them. It projects a map, so to speak, in which the fragmentary conditions immediately present to sense-perception may find their bearings, or in which in some way the missing members may be discovered. A familiar instance of this would be the experience one sometimes has in trying to recall the forgotten name of an acquaintance. The images of scenes associated with the acquaintance, of various letters and sounds of words associated with his name, which may be called to mind, do not function so much as direct stimuli as they do as intermediate or indirect stimuli. It is a case of casting about for the image that will function as a direct stimulus in bringing an acquired but temporarily lost adjustment into play.

Image functions on the side of *response*, on the side of developing new habits, new forms of adjustment, in so far as the conditions of action which it represents, or projects, are not the actual conditions of action, either because they are so inaccessible as to demand development of new habits for purposes of attaining them, or else because, though actually present, they stimulate relatively uncontrolled æsthetic or emotional responses, whose very expression, however, may be translated into a demand for more adequate, intelligent, controlled habits or adjustments. The conscious projection

of the unattained, even of the unattainable, not only marks a certain degree of attainment, but is the initiation of further development. Here we see again that a stimulus is a condition of action in both senses of the ambiguity of the word "condition." It is both a state or condition of activity, and an initiation or condition of further activity.

As an indirect stimulus growing out of a problematic situation imagery necessarily brings in more or less irrelevant material. If I may be permitted the paradox, imagery would not be relevant if it did not bring in the irrelevant. The novelty of the situation makes it impossible to say in advance what will be relevant. Hence the demand for range and play of imagery. It is only the successful adjustment finally hit upon and worked out that is the test of the relevancy of the imagery which anticipated it. Even this test may be unfair, since it is likely to discount the value of imagery which is now ruled out, but which may have been indispensable in turning up the proper cues in the course of the process of reflection and experiment.

To restate the point in regard to the psychological function of imagery. Imagery functions in representing control as ideal, not as fact. It represents a possible process of reconstructing adjustments and habits; it is not an actual and complete readjustment. It arises normally in a stress, in the presence of fresh demands and new problems. It looks forward in every possible direction, because it is important and difficult to foresee consequences. But suppose the new adjustment to be made with reasonable success—reasonable, note. Suppose the ideal to be realized. With practice the adjustment becomes less problematic, more under control—that is, it comes to require less conscious attention to bring it about. The image loses some of its sensuous content. It becomes worn away, more remote, until at last it becomes respectably vague and abstract

enough to be classed as a concept. Imagery is the stimulus of the reconstructive process between habit and habit, concept and concept, idea and idea.

We now return to the original question regarding the logical function of imagery. There is only one condition, I believe, on which we can accept the assumption of both empiricist and conceptualist that imagery is on the same level with sense-perception, and that is the assumption that meaning, logical meaning, is on the same level with habit, habit naming the more obvious, overt forms of response to stimuli, logical meaning naming the more internal forms of response or reference. Psychical response and logical reference thus become equivalent terms.

We have seen that imagery may exercise two functions with reference to habit, as direct and as indirect stimulus; so also with reference to logical meaning, imagery may be the stimulus to a direct reference of the idea to reality, or it may present, or mirror, conditions with regard to which some new meaning is to be worked out. The quality, the sense-content, of imagery may *per se* suffice directly to arouse a habitual attitude, to call forth an immediate reference to reality. It may cause one to "tumble" to what is taking place, to "catch on," to apprehend (pardon these expressions for the sake of their description of the motor aspect of meaning), as when we say, for example: "It came over me like a flash what I was to do, and I did it." Our more abstract and complicated forms of judgment and reasoning, in which the imagery involved is reduced to the minimum of conscious, qualitative content, are of the same order, though at the other extreme, so far as immediate overt expression is concerned. We are working along lines of habitual activity so familiar that we can work almost in the dark. We need no elaborate imagery. Guided only by the waving of a signal flag or by the shifting gleam of a sema-

phore, we thread our way swiftly through the maze of tracks worn smooth by use and habit. But suppose a new line of habit is to be constructed. No signal flags or semaphores will suffice. A detailed survey of the proposed route must be had, and here is where imagery with a rich and varied yet flexible sensuous content, growing out of previous surveys, may function in projecting and anticipating the new set of conditions, and thus become the stimulus of a new line of habit, of a new and more far-reaching meaning. As this new line of habit, of meaning, gets into working order with the rest of the system, imagery tends normally to decline again to the rôle of signal flags and semaphores.

The distinction in logical theory between "image" and "idea" which we have been considering is only a half-truth from the point of view of psychology. It virtually limits the "idea" to a fixed, unalterable reference of a fragment of a desiccated image to a reality beyond. It indifferently loses the play and richness of imagery to the floating remnants of sense-content, or to an external reality. It limits itself to an examination of a final stage in thinking, a stage in which the image acts as a direct stimulus, a stage in which the sense-content of the image has little or no function *per se*, because this content now initiates directly a habitual adjustment, a worked-out and established adaptation of means to end. It overlooks the process of conscious reflection which logically precedes every such adjustment not purely instinctive or accidental, a process in which imagery as representational functions indirectly in bringing the resources of past experience, the fund of acquired habits, to bear upon the fragmentary and problematic elements of sense-experience actually present, thus maintaining the flow and continuity of experience. It fails to recognize that in the inseparable association of meaning with quality, of "idea" with "image," there goes the possibility of working

out and applying new meanings from old, of developing deeper meanings, of testing and affirming more inclusive and universal meaning.

We are confronted with this alternative. Either the image has a logical function in virtue of its sense-content, or else the image functions logically merely as a symbol, the sense-content of which is a matter of complete logical indifference. According to the empiricist, the former is the case, according to the conceptualist, the latter. The empiricist would say that he needs the image to piece out the data upon which logical processes operate. Having met this need, the image is retired from active service. For the empiricist the processes of thought, observing, comparing, generalizing, etc., are as independent of the data they use as, for the conceptualist, logical meaning, reference, and "idea" are independent of the sense-content of the "image." In reality he agrees with the conceptualist in excluding the sense-content of the image from the processes of thought, and hence from the domain of logic.

From the standpoint of psychological theory the conceptualist is an improvement over the empiricist. He has gone a step farther in the analysis of thought-processes by showing that they are bound up with some kind of imagery, however irrelevant, inconsequential, and worn down the sense-quality of that imagery may be. His statement of ideas as references to reality lends itself readily, as we have seen, to the unitary conception in psychology of ideo-motor, or sensori-motor, activity. But is this where logical theory is to stop, while psychology as a study of "states of consciousness" takes up the unfinished tale and carries it forward? It seems hardly possible, unless logic is willing to give over its task of thinking about thinking.

Reduce the image to a mere symbol. Let its sense-quality be a matter of complete indifference. What have

you, then, but an elementary and primitive type of reflex action? It is of no particular consequence even from what sense-organ it appears to proceed, or whether it appears to be peripherally or centrally excited. It is simply a case of feel and act; touch and go. Is this thinking? It may be regarded as either the germ or the finality of thinking, but what most of us are inclined to believe is the true subject-matter of logic is not to be limited to a simple reflex, or even to a chain of reflexes. It is something more complex, even if nothing more than an intricate tangle of chains of reflexes.

The complexity of the process called thinking does not reside alone in the instinctive or habitual reflexes involved. The more instinctive and habitual any adjustment may be, the less is it a matter of thought, as everyone knows, although its biological complexity is none the less patent to one who looks at it from the outside. The complexity of the thinking process resides in consciousness also; it resides in the imagery, the stimuli, the mere symbols, if you like, that have "come" to consciousness. As soon as the complexity begins to be *felt*, as soon as any discrimination whatsoever begins to be introduced or appreciated, at that instant the sense-content, the quale, of imagery begins to have a logical function. Conscious discrimination, however vague and evanescent, and the logical function of the quale of imagery are born together, unless one chooses to regard the more obvious and deliberate forms of conscious discrimination as more characteristic of a logical process. It is only as the sense-contents of various images are discriminated and compared that anything like thinking can be conceived to go on. The particular sense-content of an image, instead of being a matter of logical indifference, is the condition, the possibility, of thinking.

The conceptualist has contributed to the data of descriptive psychology by calling attention, by implication at least, to

the remote and reduced character of the imagery which may characterize thinking. But it by no means follows that the more remote and reduced the sense-content of an image becomes, the less important is that sense-content for thinking, the less demand for discrimination. On the contrary, the sense-content that remains may be of supreme logical importance. It may be the quintessence of meaning. It may be the conscious factor which, when discriminated from another almost equally sublimated conscious factor, may determine a whole course of action. The delicacy and rapidity with which these reduced forms of imagery as they hover about the margin of consciousness or flit across its focus are discriminated and caught, are points in the technique of that long art of thinking, begun in early childhood. The fact that questionnaire investigations—like that of Galton's, for example—have in many instances failed to discover in the minds of scientists and advanced thinkers a rich and varied furniture of imagery does not argue the poverty of imagery in such minds; it argues, rather, a highly developed technique, a species of virtuosity, with reference to the sense-content of the types of imagery actually in use.

To push a step farther the alternative we have already stated in a preliminary way: Either the "idea," or "logical meaning," lies outside of the process of thinking, as a mere impulse or reflex; or else, in virtue of the sense-content of its "image," it enters into that conscious process of discrimination, comparison, and selection, of light and shade, of doubt and inquiry, which constitutes the evolution of a judgment, which makes the life-history of a movement of thought.

IX

THE LOGIC OF THE PRE-SOCRATIC PHILOSOPHY[1]

It is not the purpose of this study to show that the Pre-Socratics possessed a system of logic which is now for the first time brought to the notice of the modern world. Indeed, there is nothing to indicate that they had reflected on mental processes in such a way as to call for an organized body of canons regulating the forms of concepts and conclusions. Aristotle attributed the discovery of the art of dialectic to Zeno the Eleatic, and we shall see in the sequel that there was much to justify the opinion. But logic, in the technical sense, is inconceivable without concepts, and from the days of Aristotle it has been universally believed that proper definitions owe their origin to Socrates. A few crude attempts at definition, if such they may be rightly called, are referred to Empedocles and Democritus. But in so far as they were conceived in the spirit of science, they essayed to define things materially by giving, so to speak, the chemical formula for their production. Significant as this very fact is, it shows that even the rudiments of the canons of thought were not the subjects of reflection.

In his *Organon* Aristotle makes it evident that the demand for a regulative art of scientific discourse was created by the eristic logic-chopping of those who were most deeply influenced by the Eleatic philosophy. Indeed, the case is quite parallel to the rise of the art of rhetoric. Aristotle regarded Empedocles as the originator of that art, as he referred the

[1] This study may be regarded as in some sense a development of pp. 7–10 of *The Necessary and the Contingent in the Aristotelian System*, published in 1896 by The University of Chicago Press. While quite independent in treatment, the two papers supplement each other.

beginnings of dialectic to Zeno. But the formulation of both arts in well-rounded systems came much later. As men conducted lawsuits before the days of Tisias and Corax, so also were the essential principles of logic operative and effective in practice before Aristotle gave them their abstract formulation.

While it is true, therefore, that the Pre-Socratics had no formal logic, it is equally true, and far more significant, that they either received from their predecessors or themselves developed the conceptions and the presuppositions on which the Aristotelian logic is founded. One of the objects of this study is to institute a search for some of these basic conceptions of Greek thought, almost all of which existed before the days of Socrates, and to consider their origin as well as their logical significance. The other aim here kept in view is to trace the course of thought in which the logical principles, latent in all attempts to construct and verify theories, came into play.

It is impossible, no doubt, to discover a body of thought which does not ground itself upon presuppositions. They are the warp into which the woof of the system, itself too often consisting of frayed ends of other fabrics, is woven with the delight of a supposed creator. Rarely is the thinker so conscious of his own mental processes that he is aware of what he takes for granted. Ordinarily this retirement to an interior line takes place only when one has been driven back from the advanced position which could no longer be maintained. Emerson has somewhere said: "The foregoing generations beheld God and Nature face to face; we through their eyes. Why should not we also enjoy an original relation to the universe? Why should not we have a poetry and philosophy of insight and not of tradition, and a religion by revelation to us and not the history of theirs?" The difficulty lies precisely in our faith in immediate insight and revelation,

which are themselves only short-cuts of induction, psychological short circuits, conducted by media we have disregarded. Only a fundamentally critical philosophy pushes its doubt to the limit of demanding the credentials of those conceptions which have come to be regarded as axiomatic.

The need of going back of Aristotle in our quest for the truth is well shown by his attitude toward the first principles of the several sciences. To him they are immediately given —ἄμεσοι προτάσεις—and hence are ultimate *a priori*. The historical significance of this fact is already apparent. It means that in his day these first principles, which sum up the outcome of previous inductive movements of thought, were regarded as so conclusively established that the steps by which they had been inferred were allowed to lapse from memory.

No account of the history of thought can hope to satisfy the demands of reason that does not *explain* the origin of the convictions thus embodied in principles. The only acceptable explanation would be in terms of will and interest. To give such an account would, however, require the knowledge of secular pursuits and ambitions no longer obtainable. It might be fruitful of results if we could discover even the theoretical interests of the age before Thales; but we know that in modern times the direction of interest characteristic of the purely practical pursuits manifests its reformative influences in speculation a century or more after it has begun to shape the course of common life. Hence we might misinterpret the historical data if they were obtainable. But general considerations, which we need not now rehearse, as well as indications contained in the later history of thought, hereinafter sketched, point to the primacy of the practical as yielding the direction of interest that determines the course it shall take.

It was said above that the principles of science are the

result of an inductive movement, and that the inductive movement is directed by an interest. Hence the principles are contained in, or rather are the express definition of, the interest that gave them birth. In other words, there is implied in all induction a process of deduction. Every stream of thought embraces not only the main current, but also an eddy, which here and there re-enters it. And this is one way of explaining the phenomenon which has long engaged the thought of philosophers, namely, the fact of successful anticipations of the discoveries of science or, more generally still, the possibility of synthetic judgments *a priori*. The solution of the problem is ultimately contained in its statement.[1]

To arrive at a stage of mentality not based on assumptions one would have, no doubt, to go back to its beginnings. Greek thought, even in the time of Thales, was well furnished with them. We cannot pause to catalogue them, but it may further our project if we consider a few of the more important. The precondition of thought as of life is that nature be uniform, or ultimately that the world be rational. This is not even, as it becomes later, a conscious demand; it is the primary ethical postulate which expresses itself in the confidence that it is so. Viewed from a certain angle it may be called the principle of sufficient reason. Closely associated with it is the universal belief of the early philosophers of Greece that everything that comes into being is bound up inseparably with that which has been before; more precisely, that there is no absolute, but only relative, Becoming. Corollaries of this axiom soon appeared in the postulates of the conservation of matter or mass, and the conservation of energy, or more properly for the ancients, of motion.

[1] The best special illustration of this truth with which I am acquainted is presented for the science of chemistry in an article by F. WALD, "Die Genesis der stöchiometrischen Grundgesetze," in *Zeitschrift für physikalische Chemie*, Vol. XVIII (1895), pp. 337 ff.

Logically these principles appear to signify that the subject, while under definition, shall remain just what it is ; and that, in the system constituted of subject, predicate, and copula, the terms shall "stay put" while the adjustment of verification is in progress. It is a matter of course that the constants in the great problem should become permanent landmarks.

Other corollaries derive from this same principle of uniformity. Seeing that all that comes to be in some sense already is, there appears the postulate of the unity of the world ; and this unity manifests itself not only in the integrity and homogeneity of the world-ground, but also in the more ideal conception of a universal law to which all special modes of procedure in nature are ancillary. In these we recognize the insistent demand for the organization of predicate and copula. Side by side with these formulæ stands the other, which requires an ordered process of becoming and a graduated scale of existences, such as can mediate between the extremes of polarity. Such series meet us on every hand in early Greek thought. The process of rarefaction and condensation in Anaximenes, the ὁδὸς ἄνω κάτω of Heraclitus, the regular succession of the four Empedoclean elements in almost all later systems — these and other examples spontaneously occur to the mind. The significance of this conception, as the representative of an effective copula, will presently be seen. More subtle, perhaps, than any of these principles, though not allowed to go so long unchallenged, is the assumption of a φύσις, that is, the assumption that all nature is instinct with life. The logical interpretation of this postulate would seem to be that the concrete system of things — subject, predicate, copula — constitutes a totality complete in itself and needing no jog from without.

In this survey of the preconceptions of the early Greek philosophers I have employed the terms of the judgment without apology. The justification for this course must come

ultimately, as for any assumption, from the success of its application to the facts. But if "logic" merely formulates in a schematic way that which in life is the manipulation of concrete experience, with a view to attaining practical ends, then its forms must apply here as well as anywhere. Logical terminology may therefore be assumed to be welcome to this field where judgments are formed, induction is made from certain facts to defined conceptions, and deductions are derived from principles or premises assumed. Speaking then in these terms we may say that the Pre-Socratics had three logical problems set for them: First, there was a demand for a predicate, or, in other words, for a theory of the world. Secondly, there was the need of ascertaining just what should be regarded as the subject, or, otherwise stated, just what it was that required explanation. Thirdly, there arose the necessity of discovering ways and means by which the theory could be predicated of the world and by which, in turn, the hypothesis erected could be made to account for the concrete experience of life: in terms of logic this problem is that of maintaining an efficient copula. It is not assumed that the sequence thus stated was historically observed without crossing and overlapping; but a survey of the history of the period will show that, in a general way, the logical requirements asserted themselves in this order.

1. Greek philosophy began its career with induction. We have already stated that the preconceptions with which it approached its task were the result of previous inductions, and indeed the epic and theogonic poetry of the Greeks abounds in thoughts indicative of the consciousness of all of these problems. Thus Homer is familiar with the notion that all things proceed from water,[1] and that, when the human body decays, it resolves itself into earth and water.[2] Other opinions might be enumerated, but they would add

[1] Ξ 201, 246. [2] H 99.

nothing to the purpose. When men began, in the spirit of philosophy, to theorize about the world, they assumed that it — the subject — was sufficiently known. Its existence was taken for granted, and that which engaged their attention was the problem of its meaning. What predicate — so we may formulate their question — should be given to the subject? It is noticeable that their induction was quite perfunctory. But such is always the case until there are rival theories competing for acceptance, and even then the impulse to gather up evidence derived from a wide field and assured by resort to experiment comes rather with the desire to test a hypothesis than to form it. It is the effort to *verify* that brings out details and also the negative instances. Hence we are not to blame Thales for rashness in making his generalization that all is Water. We do not know what indications led to this conclusion. Aristotle ventured a guess, but the motives assumed for Thales agree too well with those which weighed with Hippo to admit of ready acceptance.

Anaximander, feeling the need of deduction as a sequel to induction, found his predicate in the Infinite. We cannot now delay to inquire just what he meant by the term; but it is not unlikely that its very vagueness recommended it to a man of genius who caught enthusiastically at the skirts of knowledge. Anaximenes, having pushed verification somewhat farther and eliciting some negative instances, rejected water and the Infinite and inferred that all was air. His ἀρχή must have the quality of infinity, but, a copula having been found in the process of rarefaction and condensation, it must occupy a determinate place in the series of typical forms of existence. The logical significance of this thought will engage our attention later.

Meanwhile it may be well to note that thus far only *one* predicate has been offered by each philosopher. This is doubtless due to the preconception of the unity and homo-

geneity of the world, of which we have already made mention. Although at the beginning its significance was little realized, the conception was destined to play a prominent part in Greek thought. It may be regarded from different points of view not necessarily antagonistic. One may say, as indeed has oftentimes been said, that it was due to ignorance. Men did not know the complexity of the world, and hence declared its substance to be simple. Again, it may be affirmed that the assumption was merely the naïve reflex of the ethical postulate that we shall unify our experience and organize it for the realization of our ideals. While increased knowledge has multiplied the so-called chemical elements, physics knows nothing of their differences, and chemistry itself demands their reduction.

The extension and enlarged scope of homogeneity came in two ways: First, it presented itself by way of abstraction from the particular predicates that may be given to things. This was due to the operation of the fundamental assumption that the world must be intelligible. Thus, even in Anaximander, the world-ground takes no account of the diversity of things except in the negative way of providing that the contrariety of experience shall arise from it. We are therefore referred for our predicate to a somewhat behind concrete experience. The Pythagoreans fix upon a single aspect of things as the essential, and find the meaning of the world in mathematical relations. The Eleatics press the conception of homogeneity until it is reduced to identity. Identity means the absence of difference ; hence, spatially considered, it requires the negation of a void and the indivisibility of the world ; viewed temporally, it precludes the succession of different states and hence the possibility of change.

We thus reach the acute stage of the problem of the One and the Many. The One is here the predicate, the subject

is the Many. The solution of the difficulty is the task of the copula, and we shall recur to the theme in due time. It may be well, however, at this point to draw attention to the fact that the One is not always identical with the predicate, nor the Many with the subject. In the rhythmic movement of erecting and verifying hypotheses the interest shifts and what was but now the predicate, by taking the place of the premises, comes to be regarded as the given from which the particular is to be derived or deduced. There is thus likewise a shift in the positions of existence and meaning. The subject, or the world, was first assumed as the given means with which to construct the predicate, its meaning; once the hypothesis has been erected, the direction of interest shifts back to the beginning, and in the process of verification or deduction the quondam predicate, now the premises, becomes the given, and the task set for thought is the derivation of fact. For the moment, or until the return to the world is accomplished, the One is the only real, the Manifold remains mere appearance.

The second form in which the sense of the homogeneity of the world embodies itself is not, like the first, static, but is altogether dynamic. That which makes the whole world kin is neither the presence nor the absence of a quality, but a principle. The law thus revealed is, therefore, not a matter of the predicate, but is the copula itself. Hence we must defer a fuller consideration of it for the present.

2. As has already been said, the inductive movement implies the deductive, and not only as something preceding or accompanying it, but as its inner meaning and ultimate purpose. So too it was with the earliest Greek thinkers. Their object in setting up a predicate was the derivation of the subject from it. In other words their ambition was to discover the ἀρχή from which the genesis of the world proceeds. But deduction is really a much more serious task

than would at first appear to one who is familiar with the Aristotelian machinery of premises and middle terms. The business of deduction is to reveal the subject, and ordinarily the subject quite vanishes from view. Induction is rapid, but deduction lags far behind. It may require but a momentary flash of "insight" on the part of the physical philosopher to discover a principle; if it is really significant, inventors will be engaged for centuries in deducing from it applications to the needs of life by means of contrivances. Thus after ages we come to know more of the subject, which is thereby enriched. The contrivances are the representatives of the copula in practical affairs; in quasi-theoretical spheres they are the apparatus for experimentation. It has just been remarked that by the application of the principles to life it is enriched; in other words, it receives new meaning, and new meaning signifies a new predicate. Theory is at times painfully aware of the multitude of new predicates proposed; rarely does it realize that there has been created a new heaven and a new earth. Without the latter, the former would be absurd.

Men take very much for granted and regard almost every achievement as a matter of course. Hence they do not become aware of their changed position except as it reflects itself in new schemes and in a larger outlook. The subject receives only a summary glance to discover what new predicate shall be evolved. Hence, while there is in Greek philosophy a strongly marked deductive movement, the theoretical results to the subject are insignificant. Thales seems, indeed, to have had no means to offer for the derivation of the world, but he evidently had no doubt that it was possible. With him and with others the assumption, however vaguely understood, seems to have been that the subject, like the predicate, was simple. Thus the essential unity of the world, considered as existence no less than as meaning, is a foregone conclusion. The

sense of a division in the subject seems to arise with Empedocles when, reaping the harvest of the Eleatic definition of substance, he parted the world, as subject and as predicate, into four elements.

We may, perhaps, pause a moment to consider the significance of the assumption of four elements which plays so large a part in subsequent philosophies. There is no need of enlarging on the importance of the association of multiple elements with the postulate that nothing is absolutely created and nothing absolutely passes away. These are indeed the pillars that support chemical science, and they further imply the existence of qualities of different rank; but that implication, as we shall see, lay even in the process of rarefaction and condensation introduced by Anaximenes. The four elements concern us here chiefly as testifying to the fact that certain practical interests had summed up the essential characteristics of nature in forms sufficiently significant to have maintained themselves even to our day. In regard to fire, air, and water this is not greatly to be wondered at; it is a somewhat different case with earth. If metallurgy and other pursuits which deal with that which is roughly classed as earth had been highly enough developed to have reacted upon the popular mind, this element could not possibly have been assumed to be so homogeneous. The conception clearly reflects the predominantly agricultural interest of the Greeks in their relation to the earth. This further illustrates the slow progress which deduction makes in the reconstitution of the subject.

It is different, however, with Anaxagoras and the Atomists. Apparently the movement begun by Empedocles soon ran its extreme course. Instead of four elements there is now an infinite number of substances, each differentiated from the other. The meaning of this wide swing of the pendulum is not altogether clear; but it is evident from the

system of Anaxagoras that the metals, for example, possessed a significance which they can not have had for Empedocles.

The opposite swing of the pendulum is seen in the later course of the Eleatics. Given a predicate as fixed and unified as they assumed, the subject cannot possibly be conceived in terms of it and hence it is denied outright. In the dialectic of Zeno and Melissus, dealing with the problems of the One and the Many, there is much that suggests the solution offered by the Atomists; but it is probably impossible now to ascertain whether these passages criticise a doctrine already propounded or pointed the way for successors. While the Eleatics asserted the sole reality of the One, Anaxagoras and the Atomists postulated a multiplicity without essential unity. But the human mind seems to be incapable of resting in that decision; it demands that the world shall have not meanings, but a meaning. This demand calls not only for a unified predicate, but also for an effective copula.

3. We have already remarked that the steps by which the predicate was inferred are for the most part unknown. Certain suggestions are contained in the reports of Aristotle, but it is safe to say that they are generally guesses well or ill founded. The summary inductive mediation has left few traces; and the process of verification, in the course of which hypotheses were rejected and modified, can be followed only here and there in the records. Almost our only source of information is the dialectic of systems. Fortunately for our present purpose we do not need to know the precise form which a question assumed to the minds of the several philosophers; the efforts which they made to meet the imperious demands of logic here speak for themselves.

At first there was no scheme for the mediation of the predicate back to the subject. Indeed there seems not to have existed in the mind of Thales a sense of its need. Anaximander raised the question, but the process of segrega-

tion or separation (ἐκκρίνεσθαι) which he propounded was so vaguely conceived that it has created more problems than it solved. Anaximenes first proposed a scheme that has borne fruits. He said that things are produced from air by rarefaction and condensation. This process offers not only a principle of difference, but also a regulative conception, the evaluation of which engaged the thought of almost all the later Pre-Socratics. It implies that extension and mass constitute the essential characters of substance, and, fully apprehended, contains in germ the whole materialistic philosophy from Parmenides at one extreme to Democritus and Anaxagoras at the other. The difficulties inherent in the view were unknown to Anaximenes; for, having a unitary predicate, he assumed also a homogeneous subject.

The logical position of Heraclitus is similar to that of Anaximenes. He likewise posits a simple predicate and further signalizes its functional character by naming it Fire. Without venturing upon debatable ground we may say that it was the restless activity of the element that caused him to single it out as best expressing the meaning of things. Its rhythmic libration typified to him the principle of change in existence and of existence in change. It is the "ever-living" copula, devouring subject and predicate alike and re-creating them functionally as co-ordinate expressions of itself. That which alone *is*, the abiding, is not the physical composition of a thing, but the law of reciprocity by which it maintains a balance. This he calls variously by the names of Harmony, Logos, Necessity, Justice. In this system of functional co-ordinates nothing escapes the accounting on 'Change;[1]

[1] In allusion to fr. 90 (DIELS). DIELS finds in fr. 108 (fr. 18, BYWATER), ὅτι σοφόν ἐστι πάντων κεχωρισμένον the thought that God is the Absolute, comparing the Νοῦς of Anaxagoras and the χωριστὴ ἰδέα of Plato and the οὐσία χωριστή of Aristotle. He assumes that σοφόν = λόγος and concedes great significance to the fragment. But this interpretation is utterly incompatible with everything else that we know of Heraclitus, and should be admitted only if it were the only one admissible. ZELLER discusses the fragment at length, Vol. I, p. 629, 1. If Diels's interpretation be accepted, the exposition above given of Heraclitus's logical position must be abandoned.

all things are in continuous flux, only the nodes of the rhythm remaining constant. It is not surprising therefore that Heraclitus has been the subject of so much speculation and comment in modern times; for the functional character of all distinctions in his system marks the affinity of his doctrines for those of modern psychology and logic.[1]

The Pythagoreans, having by abstraction obtained a predicate, acknowledged the existence of the subject, but did not feel the need of a copula in the theoretical sphere, except as it concerned the inner relation of the predicate. To them the world was number, but number itself was pluralistic, or let us rather say dualistic. The odd and the even, the generic constituents of number, had somehow to be brought together. The bond was found in Unity, or, again, in Harmony. When they inquired how numbers constituted the world, their answer was in general only a nugatory exercise of an unbridled fancy.[2] Such and such a number was Justice, such another, Man. It was only in the wholly practical sphere of experiment that they reached a conclusion worth recording. Its significance they themselves did not perceive. Here, by the application of mathematical measurements to sounds, they discovered how to produce tones of a given pitch, and thus successfully demonstrated the efficiency of their copula.

The Eleatics followed the same general course of abstraction; but with them the sense of the unity of the world effaced its rich diversity. Xenophanes does not appear to have pressed the conception so far as to deny all change within the world. Parmenides, however, bated no jot of the legitimate consequences of his logical position, interpreting, as he did, the predicate, originally conceived as meaning, in

[1] It has been, and in some quarters is still, the fashion to say that Heraclitus is the originator of the doctrine of relativity; but Zeller is quite right in denying the charge. No doubt his teachings lent themselves readily to such a development, but he did not so express himself. According to him the *contrarieties coexist in the process.*

[2] *Cf.* RITTER-PRELLER, §65c.

terms of existence. That which is simply *is*. Thus there is left only a one-time predicate, now converted into a subject of which only itself, as a brute fact, can be predicated. Stated logically, Parmenides is capable only of uttering identical propositions: A=A. The fallacious character of the report of the senses and the impossibility of Becoming followed as a matter of course. Where the logical copula is a mere sign of equation there can be neither induction nor deduction. We are caught in a theoretical *cul-de-sac*.

We are not now concerned to know in what light the demand for a treatise on the world of Opinion may have appeared to Parmenides himself. The avenues by which men reach conclusions which are capable of simplification and syllogistic statement are too various to admit of plausible conjecture in the absence of specific evidence. But it is clear that his resort to the expedient reflected a consciousness of the state of deadlock. In that part of his philosophical poem he dealt with many questions of detail in a rather more practical spirit. Following the lead of Heraclitus and the Pythagoreans he was more successful here than in the field of metaphysics. Thus we see once more that the wounds of theory are healed by practice. But, as usual, even though the metaphysician does receive the answer to his doubts by falling into a severely practical pit and extricating himself by steps which he fashions with his hands, his mental habit is not thereby reconstructed. The fixed predicate of the Eleatics was bequeathed to the Platonic-Aristotelian formal logic, and induction and deduction remained for centuries in theory a race between the hedgehog and the hare.[1] The true significance of the destructive criticism brought to bear by Zeno and Melissus on the concepts of unity, plurality, continuity, extension, time, and motion is simply this: that

[1] This, in a word, is the burden of my study of *The Necessary and the Contingent in the Aristotelian System*.

when by a shift of the attention a predicate becomes subject or meaning fossilizes as existence, the terms of the logical process lose their functional reference and grow to be unmeaning and self-contradictory.

We have already remarked that Empedocles, Anaxagoras, and the Atomists sought to solve the problem of the One and the Many, of the subject and the predicate, by shattering the unitary predicate and thus leaving the field to plurality in both spheres. But obviously they were merely postponing the real question. Thought, as well as action, demands a unity somewhere. Hence the absorbing task of these philosophers is to disclose or contrive such a bond of unity. The form which their quest assumed was the search for a basis for physical interaction.[1]

Empedocles clearly believed that he was solving the difficulty in one form when he instituted the rhythmic libration between unity under the sway of Love and multiplicity under the domination of Hate. But even he was not satisfied with that. While Love brought all the elements together into a sphere and thus produced a unity, it was a unity constituted of a mixture of elements possessing inalienable characters not only different but actually antagonistic. On the other hand, Hate did indeed separate the confused particles, but it effected a sort of unity in that, by segregating the particles of the several elements from the others, it brought like and like together. In so far Aristotle was clearly right in attributing to Love the power to separate as well as to unite. Moreover, it would seem that there never was a moment in which both agencies were not conceived to be operative, to however small an extent.

Empedocles asserted, however, that a world could arise only in the intervals between the extremes of victory in the

[1] I have in preparation a study of the problem of physical interaction in Pre-Socratic philosophy which deals with this question in all its phases.

contest between Love and Hate, when, so to speak, the battle was drawn and there was a general *mêlée* of the combatants. It may be questioned, perhaps, whether he distinctly stated that in our world everything possessed its portion of each of the elements; but so indispensable did he consider this *mixture* that its function of providing a physical unity is unmistakable. A further evidence of his insistent demand for unity—the copula—is found in his doctrine that only like can act on like; and the scheme of pores and effluvia which he contrived bears eloquent testimony to the earnest consideration he gave to this matter. For he conceived that all interaction took place by means of them.

Empedocles, then, may be said to have annulled the decree of divorce he had issued for the elements at the beginning. But the solution here too is found, not in the theoretical, but in the practical, sphere; for he never retracts his assertion that the elements are distinct and antagonistic. But even so his problem is defined rather than solved; for after the elements have been brought within microscopic distance of each other in the mixture, since like can act only on like, the narrow space that separates them is still an impassable gulf.[1]

Anaxagoras endowed his infinitely numerous substances with the same characters of fixity and contrariety that mark the four elements of Empedocles. For him, therefore, the difficulty of securing unity and co-operation in an effective copula is, if that be possible, further aggravated. His grasp of the problem, if we may judge from the relatively small body of documentary evidence, was not so sure as that of Empedocles, though he employed in general the same means for its solution. He too postulates a mixture of all substances, more consciously and definitely indeed than his

[1] This statement is, of course, figurative, since Empedocles denied the existence of a void.

predecessor. Believing that only like can act on like,[1] he is led to assume not only an infinite multiplicity of substances, but also their complete mixture, so that everything, however small, contains a portion of every other. Food, for example, however seeming-simple, nourishes the most diverse tissues of the body. Thus we discover in the universal mixture of substances the basis for co-operation and interaction.

Anaxagoras, therefore, like Empedocles, feels the need of bridging the chasm which he has assumed to exist between his distinct substances. Their failure is alike great, and is due to the presuppositions they inherited from the Eleatic conception of a severe homogeneity which implies an absolute difference from everything else. The embarrassment of Anaxagoras increases with the introduction of the Νοῦς. This agency was conceived with a view to explaining the formation of the world; that is, with a view to mediating between the myriad substances in their essential aloofness and effecting the harmonious concord of concrete things. While, even on the basis of a universal mixture, the function of the Νοῦς was foredoomed to failure, its task was made more difficult still by the definition given to its nature. According to Anaxagoras it was the sole exception to the composite character of things; it is absolutely pure and simple in nature.[2] By its definition, then, it is prevented from accomplishing the work it was contrived to do; and hence we cannot be surprised at the lamentations raised by Plato and Aristotle about the failure of Anaxagoras to employ the

[1] I cannot now undertake a defense of this statement, which runs counter to certain ancient reports, but must reserve a full discussion for my account of physical interaction.

[2] The motive for making this assumption was clearly the desire to make of the Νοῦς the prime mover in the world while exempting it from reaction on the part of the world, which would have been unavoidable if its nature had contained parts of other things. It is the same problem of "touching without being touched in return" that led Aristotle to a similar definition of God and of the rational soul. The same difficulty besets the absolutely "simple" soul of Plato's *Phaedo* and the causality of the Ideas.

agency he had introduced. To be sure, the Noûs is no more a *deus ex machina* than were the ideas of Plato or the God of Aristotle. They all labored under the same restrictions.

The Atomists followed with the same recognition of the Many, in the infinitely various kinds of atoms; but it was tempered by the assumption of an essential homogeneity. One atom is distinguished from another by characteristics due to its spatial relations. Mass and weight are proportional to size. Aristotle reports that, though things and atoms have differences, it is not in virtue of their differences, but in virtue of their essential identity, that they interact.[1] There is thus introduced a distinction which runs nearly, but not quite, parallel to that between primary and secondary qualities.[2] Primary qualities are those of size, shape, and perhaps[3] position; all others are secondary. On the other hand, that which is common to all atoms is their corporeity, which does indeed define itself with reference to the primary (spatial) qualities, but not alike in all. The atoms of which the world is constituted are alike in essential nature, but they differ most widely in position.

It is the void that breaks up the unity of the world — atomizes it, if we may use the expression. It is the basis of all discontinuity. Atoms and void are thus polar extremes reciprocally exclusive. The atoms in their utter isolation in space are incapable of producing a world. In order to bridge the chasm between atom and atom, recourse is had to motion eternal, omnipresent, and necessary. This it is that annihilates distances. In the course of their motion atoms collide, and in their impact one upon the other the

[1] ARISTOTLE, *De Generatione et Corruptione*, 323b 10 f.

[2] We have seen that this distinction was latent in Anaximenes's process of rarefaction and condensation. For other matters see CHAIGNET, *Histoire de la Psychologie*, Vol. I, p. 114, whose account, however, needs to be corrected in some particulars.

[3] I say "perhaps" because ancient reports differ as to the precise relation of position and arrangement to the distinction between qualities, primary and secondary.

Atomists find the precise mode of co-operation by which the world is formed.[1] To this agency are due what Lucretius happily called "generating motions."

The problem, however, so insistently pursued the philosophers of this time that the Atomists did not content themselves with this solution, satisfactory as modern science has pretended to consider it. They followed the lead of Empedocles and Anaxagoras in postulating a widespread, if not absolutely universal, *mixture*. Having on principle excluded "essential" differences among the atoms, the impossibility of finally distinguishing essential and non-essential had its revenge. Important as the device of mixture was to Empedocles and Anaxagoras, just so unmeaning ought it to have been in the Atomic philosophy, provided that the hypothesis could accomplish what was claimed for it. It is not necesary to reassert that the assumption of "individua," utterly alienated one from the other by a void, rendered the problem of the copula insoluble for the Atomists.

Diogenes of Apollonia is commonly treated contemptuously as a mere reactionary who harked back to Anaximenes and had no significance of his own. The best that can be said of such an attitude is that it regards philosophical theories as accidental utterances of individuals, naturally well or ill endowed, who happen to express conclusions with which men in after times agree or disagree. A philosophical tenet is an atom, set somewhere in a vacuum, utterly out of relation to everything else. But it is impossible to see how, on this theory, any system of thought should possess any significance for anybody, or how there should be any progress even, or retardation.

Viewed entirely from without, the doctrine of Diogenes would seem to be substantially a recrudescence of that of

[1] This is only another instance of what MR. VENN (*Empirical Logic*, p. 56) has wittily alluded to as "screwing up the cause and the effect into close juxtaposition."

Anaximenes. Air is once more the element or ἀρχή out of which all proceeds and into which all returns. Again the process of transformation is seen in rarefaction and condensation; and the attributes of substance are those which were common to the early hylozoists. But there is present a keen sense of a problem unknown to Anaximenes. What the early philosopher asserted in the innocence of the youth of thought, the later physiologist reiterates with emphasis because he believes that the words are words of life.

The motive for recurring to the earlier system is supplied by the imperious demand for a copula which had so much distressed Empedocles, Anaxagoras, and the Atomists. And here we are not left to conjecture, but are able to refer to the *ipsissima verba* of our philosopher. After a brief prologue, in which he stated that one's starting-point must be beyond dispute, he immediately[1] turned to his theme in these words:[2] "In my opinion, to put the whole matter in a nutshell, all things are derived by alteration from the same substance, and indeed all are one and the same. And this is altogether evident. For if the things that now exist in the world—earth and water and air and fire and whatsoever else appears to exist in this world—if, I say, any one of these were different from the other, different that is to say in its proper peculiar nature, and did not rather, being one and the same, change and alter in many ways, then in nowise would things be able to mix with one another, nor would help or harm come to one from the other, nor would any plant spring from the earth, nor any other living thing come into being, if things were not so constituted as to be one and the same."

These words contain a singularly interesting expression

[1] Simplicius says εὐθὺς μετὰ τὸ προοίμιον; see DIELS, *Die Fragmente der Vorsokratiker* (Berlin, 1903), p. 347, l. 18.

[2] Fr. 2, DIELS.

of the need of restoring the integrity of the process which had been lost in the effort to solve the problem of the One and the Many without abandoning the point of view won by the Eleatics. Aristotle and Theophrastus paraphrase and sum up the passage above quoted by saying[1] that interaction is impossible except on the assumption that all the world is one and the same. Hence it is manifest, as was said above, that the return of Diogenes to the monistic system of Anaximenes had for its conscious motive the avoidance of the dualism that had sprung up in the interval and had rendered futile the multiplied efforts to secure an effective copula.

We should note, however, that in the attempt thus made to undo the work of several generations Diogenes retained the principle which had wrought the mischief. We have before remarked that the germ of the Atomic philosophy was contained in the process of rarefaction and condensation. Hence, in accepting it along with the remainder of Anaximenes's theory, the fatal assumption was reinstated. It is the story of human systems in epitome. The superstructure is overthrown, and with the débris a new edifice is built upon the old foundations.

In the entire course of philosophical thought from Thales onward the suggestion of an opposition between the subject and the predicate had appeared. It has often been said that it was expressed by the search for a *φύσις*, or a *true nature*, in contrast with the world as practically accepted. There is a certain truth in this view; for the effort to attain a predicate which does not merely repeat the subject does imply that there is an opposition. But the efforts made to return from the predicate to the subject, in a deductive movement, shows that the difference was not believed to be absolute. This is true, however, only of those fields of speculation that lie next to the highways of practical life, which lead

[1] See DIELS, *Fragmente der Vorsokratiker*, p. 343, l. 2; p. 344, l. 27.

equally in both directions, or, let us rather say, which unite while they mark separation. In the sphere of abstract ideas the sense of embarrassment was deep and constantly growing deeper. The reconstruction, accomplished on lower levels, did not attain unto those heights. Men doubted conclusions, but did not think to demand the credentials of their common presuppositions.

Side by side with the later philosophers whom we have mentioned there walked men whom we are wont to call the Sophists. They were the journalists and pamphleteers of those days, men who, without dealing profoundly with any special problem, familiarized themselves with the generalizations of workers in special fields and combined these ideas for the entertainment of the public. They were neither philosophers nor physicists, but, like some men whom we might cite from our own times, endeavored to popularize the teachings of both. Naturally they seized upon the most sweeping generalizations and the preconceptions which disclosed themselves in manifold forms. Just as naturally they had no eyes with which to detect the significance of the besetting problems at which, in matters more concrete, the masters were toiling. Hence the contradictions, revealed in the analysis we have just given of the philosophy of the age, stood out in utter nakedness.

The result was inevitable. The inability to discover a unitary predicate, more still, the failure to attain a working copula, led directly to the denial of the possibility of predication. There was no truth. Granted that it existed, it could not be known. Even if known, it could not be communicated. In these incisive words of Gorgias the conclusion of the ineffectual effort to establish a logic of science is clearly stated. But the statement is happily only the half-truth, which is almost a complete falsehood. It takes no account of the indications, everywhere present, of a needed

reconstruction. Least of all does it catch the meaning of such a demand.

The Sophists did not, however, merely repeat in abstract from the teachings of the philosophers. It matters not whether they originated the movement or not; at all events they were pioneers in the field of moral philosophy. Here it was that they chiefly drew the inferences from the distinction between *φύσει* and *νόμῳ*. Nothing could have been more effective in disengaging the firmly rooted moral prepossessions and rendering them amenable to philosophy. Just here, at last, we catch a hint of the significance of the logical process. In a striking passage in Plato's *Protagoras*,[1] which one is fain to regard as an essentially true reproduction of a discourse by that great man, Justice and Reverence are accorded true validity. On inquiring to what characteristic this honorable distinction is due, we find that it does not reside in themselves; it is due to *the assumption that a state must exist.*

Here, then, in a word, is the upshot of the logical movement. Logical predicates are essentially hypothetical, deriving their validity from the interest that moves men to affirm them. When they lose this hypothetical character, as terms within a volitional system, and set up as entities at large, they cease to function and forfeit their right to exist.

[1] 320 C f.

X

VALUATION AS A LOGICAL PROCESS

THE purpose of this discussion is to supply the main outlines of a theory of value based upon analysis of the valuation-process from the logical point of view. The general principle which we shall seek to establish is that judgments of value, whether passed upon things or upon modes of conduct, are essentially objective in import, and that they are reached through a process of valuation which is essentially of the same logical character as the judgment-process whereby conclusions of physical fact are established—in a word, that the valuation-process, issuing in the finished judgment of value expressive of the judging person's definitive attitude toward the thing in question, is constructive of an order of reality in the same sense as, in current theories of knowledge, is the judgment of sense-perception and science. Our method of procedure to this end will be that of assuming, and adhering to as consistently as possible, the standpoint of the individual in the process of deliberating upon an ethical or economic problem (for, as we shall hold, all values properly so called are either ethical or economic), and of ascertaining, as accurately as may be, the meaning of the deliberative or evaluating process and of the various factors in it as these are presented in the individual's apprehension. It is in this sense that our procedure will be logical rather than psychological. We shall be concerned to determine the *meaning* of the object of valuation as object, of the standard of value as standard, and of the valued object as valued, in terms of the individual's own apprehension of these, rather than to ascertain the nature and conditions of his apprehensions of these considered as psychical events.

Our attention will throughout be directed to these factors or phases of the valuation-process in their functional aspect of determinants of the valuing agent's practical attitude, and never, excepting for purposes of incidental illustration and in a very general and tentative way, as events in consciousness mediated by more "elementary" psychical processes. The results which we shall gain by adhering to this method will enable us to see not merely that our judgments of value are in function and meaning objective, but also that our judgments of sense-perception and science are, as such, capable of satisfactory interpretation only as being incidental to the attainment and progressive reconstruction of judgments of value.

The first three main divisions will be given over to establishing the objectivity of content and function of judgments of value. The fourth division will present a detailed analysis of the two types of judgment of value, the ethical and economic, defining them and relating them to each other, and correlating them in the manner just suggested with judgment of the physical type. After considering, in the fifth part, certain general objections to the positions thus stated, we shall proceed in the sixth and concluding division to define the function of the consciousness of value in the economy of life.[1]

I

The system of judgments which defines what one calls the objective order of things is inevitably unique for each particular individual. No two men can view the world from the standpoint of the same theoretical and practical inter-

[1] Considerations of space as well as circumstances attending the immediate preparation of this discussion for the press have precluded any but the most general and casual reference to the recent literature of the subject. Much of this literature only imperfectly distinguishes the logical and psychological points of view, so that critical reference to it, unaccompanied by detailed restatement and analysis of the positions criticised, would be useless.

ests, nor can any two proceed in the work of gaining for themselves knowledge of the world with precisely equal degrees of skill and accuracy. Each must be prompted and guided, in the construction of his knowledge of single things and of the system in which they have their being, by his own particular interests and aims; and even when one person in a measure shares in the interests and aims of another, the rate and manner of procedure will not be the same for both, nor will the knowledge gained be for both equally systematic in arrangement or in interrelation of its parts. Each man lives in a world of his own—a world, indeed, identical in certain fundamental respects with the worlds which his fellow-men have constructed for themselves, but one nevertheless necessarily unique through and through because each man is a unique individual. There is, doubtless, a "social currency" of objects which implies a certain identity of meaning in objects as experienced by different individuals. The existence of society presupposes, and its evolution in turn develops and extends, a system of generally accepted objects and relations. Nevertheless, the "socially current object" is, as such, an abstraction just as the uniform social individual is likewise an abstraction. The only concrete object ever actually known or in any wise experienced by any person is the object as constructed by that person in accordance with his own aims and purposes, and in which there is, therefore, a large and important share of meaning which is significant to no one else.

It is needless in this discussion to dwell at length upon the general principle of recent "functional" psychology, that practical ends are the controlling factors in the acquisition of our knowledge of objective things. We shall take for granted the truth of the general proposition that cognition, in whatever sphere of science or of practical life, is essentially teleological in the sense of being incidental always,

more or less directly, to the attainment of ends. Cognition, as the apperceptive or attentive process, is essentially the process of scrutinizing a situation (whether theoretical or practical) with a view to determining the availability for one's intended purpose of such objects and conditions as the situation may present. The objects and conditions thus determined will be made use of or ignored, counted upon as advantageous or guarded against as unfavorable — in a word, responded to — in ways suggested by their character as ascertained through reference to the interest in question. In this sense, then, objective things as known by individual persons are essentially complex stimuli whose proper function and reason for being it is to elicit useful responses in the way of conduct — responses conducive to the realization of ends.

From this point of view, then, the difference between one person's knowledge of a particular object and another's signifies (1) a difference between these persons' original purposes in setting out to gain knowledge of the object, and (2) consequently a difference between their present ways of acting with reference to the object. The bare object as socially current is, at best, for each individual simply a ground upon which subsequent construction may be made; and the subsequent construction which each individual is prompted by his circumstances and is able to work out in judgment first makes the object, for this individual, real and for his purposes complete.

Now, it is our primary intention to show that objects are, in cases of a certain important class, not yet ready to serve the person who knows them in their proper character of stimuli, when they have been, even exhaustively, defined in merely physical terms. It is very often not enough that the dimensions of an object and its physical properties, even the more recondite ones as well as those more commonly under-

stood — it is often not enough for the purposes of an agent that these characters should make up the whole sum of his knowledge of the object in question. A measure of knowledge in terms of physical categories is often only a beginning — the result of a preliminary stage of the entire process of teleological determination, which must be carried through before the object of attention can be satisfactorily known. In the present study of the logic of valuation we shall be occupied exclusively with the discussion of cases of this kind. In our judgments of sense-perception and physical science we have presented to us material objects in their physical aspect. When these latter are inadequate to suggest or warrant overt conduct, our knowledge of them must be supplemented and reconstructed in ways presently to be specified. It is in the outcome of judgment-processes in which this work of supplementing and reconstructing is carried through that the consciousness of value, in the proper sense, arises, and these processes, then, are those which we shall here consider under the name of "processes of valuation." They will therefore best be approached through specification of the ways in which our physical judgments may be inadequate.

Let us, then, assume, as has been indicated, that the process of acquiring knowledge — that is to say, the process of judgment or attention — is in every case of its occurrence incidental to the attainment of an end. We must make this assumption without attempting formally to justify it — though in the course of our discussion it will be abundantly illustrated. Let us, in accordance with this view, think of the typical judgment-process as proceeding, in the main, as follows: First of all must come a sense of need or deficiency, which may, on occasion, be preceded by a more or less violent and sudden shock to the senses, forcibly turning one's attention to the need of immediate action. By degrees this sense of need will grow more definite and come to express itself in

a more or less "clear and distinct" image of an end, toward which end the agent is drawn by desire and to which he looks with much or little of emotion. The emergence of the end into consciousness immediately makes possible and occasions definite analysis of the situation in which the end must be worked out. Salient features of the situation forthwith are noticed — whether useful things or favoring conditions, or, on the other hand, the absence of any such. Thus predicates and then subjects for many subsidiary judgments in the comprehensive judgment-process emerge together in action and interaction upon each other. The predicates, developed out of the general end toward which the agent strives, afford successive points of view for fresh analyses of the situation. The logical subjects thus discovered — *objects* of attention and knowledge — require, on the other hand, as they are scrutinized and judged, modification and re-examination of the end. The end grows clearer and fuller of detail as the predicates or implied ("constituent") ideas which are developed out of it are distinguished from each other and used in making one's inventory of the objective situation. Conversely, the situation loses its first aspect of confusion and takes on more and more the aspect of an orderly assemblage of objects and conditions, useful, indifferent, and adverse, by means of which the end may in greater or less measure be attained or must, in however greatly modified a form, be defeated. Now, in this development of the judgment-process, it must be observed, the end must be more or less clearly and consistently conceived throughout as an *activity*, if the objective means of action which have been determined in the process are not to be, at the last, separate and unrelated data still requiring co-ordination. If the end has been so conceived, the means will inevitably be known as members of a mechanical *system*, since the predicates by which they have been determined have at every

point involved this factor of amenability to co-ordination. The judgment-process, if properly conducted and brought to a conclusion, must issue at the end in the functional unity of a finished plan of conduct with a perfected mechanical co-ordination of the available means.

We have now to see that much more may be involved in such a process as this than has been explicitly stated in our brief analysis. For the end itself may be a matter of deliberation, just as must be the physical means of accomplishing it; and, again, the means may call for scrutiny and determination from other points of view than the physical and mechanical. The final action taken at the end may express the outcome of deliberate ethical and economic judgment as well as of judgments in the sphere of sense-perception and physical science. Let us consider, for example, that one's end is the construction of a house upon a certain plot of ground. This end expresses the felt need of a more comfortable or more reputable abode, and has so much of general presumption in its favor. There may, however, be many reasons for hesitation. The cost in time or money or materials on hand may tax one's resources and injuriously curtail one's activities along other lines. And there may be ethical reasons why the plan should not be carried out. The house may shut off a pleasing prospect from the view of the entire neighborhood and serve no better end than the gratification of its owner's selfish vanity. It will cost a sum of money which might be used in paying just, though outlawed, debts.

Now, from the standpoint of such problems as these the fullest possible preliminary knowledge of the physical and mechanical fitness of our means must still be very abstract and general. It would be of use in any undertaking like the one we have supposed, but it is not sufficient in so far as the problem is one's own problem, concrete, particular, and so

unique. One may, of course, proceed to the stage of physical judgment without having settled the ethical problems which may have presented themselves at the outset. The end may be entertained tentatively as a hypothesis until certain mechanical problems have been dealt with. But manifestly this is only postponement of the issue. The agent is still quite unprepared, even after the means have been so far determined, to take the first step in the execution of the plan; indeed, his uncertainty is probably only the more harassing than before. Moreover, the economic problems in the case are now more sharply defined, and these for the time being still further darken counsel. Manifestly the need for deliberation is at this point quite as urgent as the need for physical determination can ever be, and the need is evidenced in the same way by the actual arrest and postponement of overt conduct. The agent, despite his physical knowledge, is not yet free to embrace the end and, having done so, use thereto the means at his disposal. It is plainly impossible to use the physical means until one knows in terms of Substance and Attribute or Cause and Effect, or whatever other physical categories one may please, what manner of behavior may be expected of them. So likewise is it as truly impossible, for one intellectually and morally capable of appreciating problems of a more advanced and complex sort, to exploit the physical properties thus discovered until ethical determination of the end and economic determination of the means have been completed.[1]

There are, then, we conclude, cases in which physical determination of the means is by itself not a sufficient prepa-

[1] In order to avoid complicating the problems, we have here employed the common notion that the physical world, physical object, and property may be taken for granted as possible adequate contents of judgment, and that the problem is only as to the objectivity of economic and ethical contents. Of course we may, in the end, come to believe that the "physical" object is itself an economic construct, in the large sense of "economic;" that is, an instrument of an effective or successful experience. Thus in terms of the illustration used above, in the attitude of entertaining in a general way the plan of building a house *of some sort or other*, one may

ration for conduct—in which there are ethical and economic problems which delay the application of the physical means to the end to which they may be physically adapted. Indeed, so much as this may well appear as sufficiently obvious without extended illustration. Everyone knows that it is nearly always necessary, in undertaking any work in which material things are used as means, to count the cost; and everyone knows likewise that not every end that is in any way attractive and within one's reach may without more ado be taken as an object of settled desire and effort. It is indeed needless to elaborate these commonplaces in the sense in which they are commonly understood. However, such is not our present purpose. Our purpose is the more specific one of showing that the meaning of Objectivity must be widened so as to include (1) the "universe" of ends in their ethical aspect and (2) the economic aspect of the means of action, as well as (3) the physical aspect to which the character of Objectivity is commonly restricted. We shall maintain that these are parts or phases of a complete conception of Reality, and that of them, consequently, Objectivity must be predicated for every essential reason connoted by such characterization of the world of things "external" to the senses. It has been with this conclusion in mind, then, that we have sought to emphasize the frequent serious inadequacy, for practical purposes, of the merely physical determination of the means in one's environment.

The principle thus suggested would imply that the ethical and economic stages in the one inclusive process of reflective attention should be regarded as involving,

have before him various building materials the ascertained qualities of which are, it may be, socially recognized as in a general way fitting them for such a use. There is doubtless so much of real foundation for the common notion here referred to. But along with the *definition* of the plan in ethical and economic judgment, along with the determination actually to build a house, and a house of a certain specific kind, must go *further* determination of the means in their physical aspects, a determination which all the while reacts into the process of determination of the end. See below, p. 246, note 3.

when they occur, the same logical function of judgment as is operative in the sphere of sense-perception and the sciences generally. Ethical and economic factors must on occasion be present at the final choice and shaping of one's course of conduct, along with the physical determinations of environing means and conditions which one has made in sense-perception. There is, then, it would appear, at least a fair presumption, though not indeed an *a priori* certainty, that these ethical and economic factors or conditions have, like the physical, taken form in a *judgment-process* which will admit of profitable analysis in accordance with whatever general theory of judgment one may hold as valid elsewhere in the field of knowledge. This presumption we shall seek to verify. Now, our interest in thus determining, first of all, the logical character of these processes will readily be understood from this, that, in the present view, these are the processes, and the only ones in our experience, which are properly to be regarded as processes of Valuation. We shall hold that Valuation, and so all consciousness of Value, properly so called, must be either ethical or economic; that the only conscious processes in which Values can come to definition are these processes of ethical and economic judgment. The present theory of Value is, then, essentially a logical one, in the sense of holding that Values are determined in and by a logical—that is, a judgmental—valuation-process and in its details is closely dependent upon the general conception of judgment of which the outlines have been sketched above. Accordingly, the exposition must proceed in the following general order: Assuming the conception of judgment which has been presented (which our discussion will in several ways further illustrate and so tend to confirm), we shall seek to show that the determinations made in ethical and economic judgment are in the proper sense objective. This will involve, first of all, a statement

of the conditions under which the ethical and economic judgments respectively arise—which statement will serve to distinguish the two types of judgment from each other. We shall then proceed to the special analysis of the ethical and economic forms from the standpoint of our general theory of judgment, thereby establishing in detail the judgmental character of these parts of the reflective process. This analysis will serve to introduce our interpretation of the consciousness of Value as a factor in the conduct and economy of life.

II

Let us then define the problem of the objective reference of the valuational judgments by stating, as distinctly as may be, the conditions by which ethical and economic deliberation, respectively, are prompted. A study of these conditions will make it easier to see in what way the judgments reached in dealing with them can be objective.

When will an end, presenting itself in consciousness in the manner indicated in our brief analysis of the judgment-process, become the center of attention, thereby checking the advance, through investigation of the possible means, to final overt action? This is the general statement of the problem of the typical ethical situation. Manifestly there will be no ethical deliberation if the imaged end at once turns the attention toward the environment of possible means, instead of first of all itself becoming the object instead of the director of attention; there will be no suspension of progress toward final action, excepting such as may later come through difficulty in the discovery and co-ordination of the means. However, there are cases in which the emergence of the end forthwith is followed by a check to the reflective process, and the agent shrinks from the end presented in imagination as being, let us say, one

forbidden by authority or one repugnant to his own established standards. The end may in such a case disappear at once; very often it will insistently remain. On this latter supposition, the simplest possibility will be the development of a mere mechanical tension, a "pull and haul" between the end, or properly the impulses which it represents, and the agent's habit of suppressing impulses of the class to which the present one is, perhaps intuitively, recognized as belonging. The case is the common one of "temptation" on the one side and "principle" or "conscience" on the other, and so long as the two forces remain thus in hard-and-fast opposition to each other there can be no ethical deliberation or judgment in a proper sense. The standard or habit may gain the day by sheer mechanical excess of power, or the new impulse, the temptation, may prevail because its onset can break down the mechanical resistance.

Out of such a situation as this, however, genuine ethical deliberation may arise on condition that standard and "temptation" can lose something of their abstractness and their hard-and-fast opposition, and develop into terms of concrete meaning. The agent may come to see that the end is in some definite way of really vital interest and too important to be put aside without consideration. He may, of course, in this fall into gross self-sophistication, like the drunkard in the classical instance who takes another glass to test his self-control and thereby gain assurance, or he may act with wisdom and with full sincerity, like Dorothea Casaubon when she renounced the impossible task imposed by her departed husband. In the moral life one can ask or hope for complete exemption from the risk of self-deception with as little reason as in scientific research. But however this may be, our present interest is in the method, not in particular results of ethical reflection. Whether properly so in a particular case or not, the imaged end may come to seem

at least plausibly defensible on grounds of principle which serve to sanction certain other modes of conduct to which a place is given in the accepted scheme of life; or the end may simply press for a relatively independent recognition on the very general ground that its emergence represents an enlargement and new development of the personality.[1] The end may thus cease to stand in the character of blind self-assertive impulse, and press its claim as a positive means of future moral growth, as bringing freedom from repressive and enfeebling restraints and as tending to the reinforcement of other already valued modes of conduct. On the other hand, the standard will cease to stand as mere resistance and negation, and may discover something of its hidden meaning as a product of long experience and slow growth, and as perhaps a vital part of the organization of one's present life, not to be touched without grave risk.

Now, on whichever side the development may first commence, a like development must soon follow on the other, and it is the action and reaction of standard and prospective or problematic end upon each other that constitutes the process of ethical deliberation or judgment. Just as in the typical judgment-process, as sketched above, so also here predicate and subject *develop each other*, when once they have given over their first antagonism and come to the attitude of reasoning together. The predicate explains itself that the subject or new end may be searchingly and fairly tested; and under this scrutiny the subject develops its full meaning as a course of conduct, thereby prompting further analysis and reinterpretation of the standard. But this is not the place for detailed analysis of the process;[2] here we are concerned only to define the type of situation,

[1] In the moral life, as elsewhere, the distinction of deduction and induction is one of degree. There is but one *type* or *method* of inference, though some inferences may approach more closely than do others the limit of pure "subsumption."

[2] See III below.

and this we may now do in the following terms: The indispensable condition of ethical judgment is the presence in the agent's mind of at least two rival interesting ends or systems of such ends. In the foregoing, the subject of the judgment is the new end that has arisen; the predicate or "standard" is the symbol for the old ends or values which in the tension of the judgment-process must be brought to more or less explicit enumeration — and, we must add, reconstruction also. Indeed, it is important, even at this stage of our discussion, to observe that Predicate and Standard are not equivalent in meaning. The predicate, or predicative side, of judgment is the imagery of control in the process, which, as we have seen, develops with the subject side; while the term "Standard" connotes the rigid fixity which belongs to the inhibiting concept or ideal in the stage before the judgment-process proper can begin. The ethical judgment-process is, in a word, just the process of reconstructing standards — as in its other and corresponding aspect it is the process of interpreting new ends. Those who oppose measures of social reform or new modes of conduct or belief on alleged grounds of "immorality" instinctively feel in doing so that the change may make its way more easily against a resistance that will candidly explain itself; and, on the other side of the social judgment-process, the more fanatical know how to turn to good advantage for their propaganda the bitterness or contempt of those who represent the established order. On both sides there are those who trust more in mechanical "pull and haul" than in the intrinsic merits of their cause.

Thus it is by encountering some rival end or entire system of ends, as symbolized by an ideal, that a new end emerging out of impulse comes to stand for an agent, as the center of a problem of conduct, and so to occupy the center of attention. And it thereby becomes an Object, as

we shall hold, which must be more fully defined in order that it may be *valued*, and accordingly be held to warrant a determinate attitude toward itself on the agent's part. We have now to define in the same general terms the typical economic situation.

In economic theory as in common thought it is not the contemplated act of applying certain means to the attainment of an end regarded as desirable that functions as the logical subject of valuation. The thing or object valued in the economic situation is one's present wealth, whether material or immaterial, one's services or labor — whatever one gives in exchange or otherwise sets apart for the attainment of a desired end or, proximately, to secure possession of the necessary and sufficient means to the attainment of a desired end. The object of attention in the valuing process is here not itself an end of action. In this respect the economic type of judgment is like the physical, for in both the object to be valued is a certain means which one is seeking to adapt to some more or less definitely imaged purpose; or a condition of which one wishes, likewise for some special purpose, to take advantage. The ultimate goal of all judgment is the determination of a course of conduct looking toward an end, and our present problem may accordingly be stated in the following terms: Under what circumstances in the judgment-process does it become necessary to the definition and attainment of an end as yet vague and indeterminate that the requisite means, as in part already physically determined, should be further scrutinized in attention and determined from the economic point of view? Or, in a word: What is the "jurisdiction" of the economic point of view?

For ordinary judgments of sense-perception the presence in consciousness of a single unquestioned end is the adequate occasion, as our analysis (assuming its validity) has shown.

For ethical judgment we have seen that the presence of conflicting ends is necessary; and we shall now hold that this condition is necessary, though not, without a certain qualification, adequate, for the economic type as well. If an imaged end can hold its place in consciousness without a rival, and the physical means of attaining it have been found and co-ordinated, then the use or consumption of the means must inevitably follow, without either ethical or economic judgment; for, to paraphrase the saying of Professor James, nothing but an end can displace or inhibit effort toward another end. The economic situation differs, then, from the ethical in this, that the end or system of ends entering into competition with the one for the time being of chief and primary interest has been brought to consciousness through reference to those "physical" means which already have been determined as necessary to this latter end. The conflict of ends in the economic situation, that is to say, is not due to a direct and intrinsic incompatibility between them. Where there manifestly is such incompatibility, judgment will be of the ethical type—as when building the house involves the foreclosure of a mortgage, and so, in working an injury to the holder of the site, may do violence to one's ideal of friendship or of more special obligation; or when an impulse to intemperate self-indulgence is met by one's ideal of social usefulness. In cases such as these one clearly sees, or can on reflection come to see, in what way an evil result to personal character will follow upon the imminent misdeed, and in what way suppression of the momentary impulse will conserve the entire approved and established way of life. Very often, however, the conflicting ends are related in no such mutually exclusive way. Each may be in itself permissible and compatible with the other, and, so far as any possible ethical discrimination can determine, there is no ground for choice between them. Thus it is only through the fact that

both ends are dependent upon a limited supply of means that one would, for example, ever bring together and deliberately oppose in judgment the purpose of making additions to his library and the necessity of providing a store of fuel for the winter. Both ends in such a case are in themselves indeed permissible in a general way, but they may very well not both of them be economically possible, and hence, for the person in question and in the presence of the economic conditions which confront him, not, in the last analysis, both ethically possible. When there is a conflict between two ends that stand in close organic relation in the sense explained above, the problem is an ethical one; when the conflict is, in the sense explained, one of competition between ends ethically permissible — not at variance, either one, that is, with other ends *directly* — for the whole or for a share of one's supply of means, the problem is of the economic type.[1]

There are three typical cases in which economic judgment or valuation of the means is necessary, and the enumeration of these will make clear the relation between the

[1] It is no part of the present view that the ends which enter into economic conflict are incapable of becoming organic and intrinsically interrelated members of the provisional system of life. On the contrary, the very essence of our contention is that adjustment established between two such conflicting ends in economic judgment is in itself ethical and a member of the provisional system of the individual's ends of life, and will stand as such, subject to modification through changes elsewhere in the system, so long as the economic conditions in view of which it was determined remained unchanged. The "mutual exclusiveness" of the ends in ethical deliberation is simply the correlate of a relative fixity in certain of the conditions of life. A man's command over the means of obtaining such things as books and fuel varies much and often suddenly in a society like ours from time to time; but, on the other hand, his physical condition, his intelligence, his powers of sympathy, and his spiritual capacity for social service commonly do not. Hence there can be and is a certain more or less definite and permanent comprehensive scheme of conduct morally obligatory upon him so far as the exercise of these latter faculties is concerned, but so far as his conduct depends upon the variable conditions mentioned, it cannot be prescribed in general terms, nor will any provisional ideal of moral selfhood admit any such prescriptions as integral elements into itself. The moral self is an ideal construct based upon these fixed conditions of life — conditions so fixed that the spiritual furtherance or deterioration likely to result from certain modes of conduct involving and affecting them can be estimated directly and with relative ease by the "ethical" method of judgment. Implied in such a construct is, of course, a

ethical and the economic types of judgment: (1) First may be mentioned the case in which ethical deliberation has apparently reached its end in the formation of a plan of action which, so far as one can see, on ethical grounds is unobjectionable. A definite "temptation" may have been overcome, or out of a more complex situation a satisfactory ethical compromise or readjustment may have been developed with much difficulty. Now, there are very often cases in which such a course of action still may not be entered on without further hesitation; for, if the plan be one requiring for its working out the use of material means, the fact of an existing limitation of one's supply of means must bring hitherto unthought of ends into conflict with it. There are doubtless many situations in which one's moral choice may be carried into practice without consideration of ways and means, as when one forgives an injury or holds his instinctive nature under discipline in the effort to attain an ascetic or a genuinely social ideal of character. But more often than the moral rigorist cares to see, questions of an economic nature must be raised after the ethical "evidence is all in"—questions which are probably more trying to a sensitive moral nature than those more dramatic situations in which the real perils of self-sophistication are vastly less, and the simpler, sharper defini-

reference to certain relatively permanent social and also physical conditions. In so far as society and physical nature, and for that matter the individual's own nature, are *variable*, these are the subjects of "scientific" or "factual" judgments incidental to the determination of problems by the "economic" method—problems, that is, for which no *general* answer, through reference to a more or less definite and stable working concept of the self, can be given. Thus our knowledge of the physical universe is largely, if not chiefly, incidental to and conditioned by our economic experience. Again, our economic judgments are in every case determinative of the self in situations in which, as presented by (perhaps even momentarily) variable conditions, physical, social, or personal, the ethical method is inapplicable. In a socialistic state, in which economic conditions might be more stable than in our present one, many problems in consumption which now are economic in one sense would be ethical because admitting of solution by reference to the type of self presupposed in the established state program of production and distribution. Even now it is not easy to specify an economic situation the solution of which is absolutely indifferent ethically. There is a possibility of intemperance even in so "æsthetic" an indulgence as Turkish rugs.

tion of the issue makes possible a less difficult, though a more decisive and edifying, victory. (2) In the second place are those cases in which the end that has emerged is without conspicuous moral quality, because, although it may represent some worthy impulse, it has not been obliged to make its way to acceptance against the resistance of desires less worthy than itself. This is the ideal case of economic theory in which "moral distinctions are irrelevant," and the economic man is free, according to the myth, to perform his hedonistic calculations without thought of moral scruple. The end ethically acceptable in itself, like the enriching of one's library, must, when the means are limited, divert a portion of the means from other uses, and will thus, *through reference to the indispensable means*, engage in conflict with other ends quite remotely, if in the agent's knowledge at all, related with itself. (3) Finally we reach the limit of apparent freedom from ethical considerations in the operations of business institutions, and perhaps especially in those of large business corporations. Apart from the routine operations of a business which involve no present exercise of the valuing judgment, there are constantly in such institutions new projects which must be considered, and which commonly must involve revaluation of the means. In this revaluation the principle of greatest revenue is supposed to be the sole criterion, regardless of other personal or social points of view from which confessedly the measure might be considered. But such a supposition, however true to the facts of current business practice it may be, we must hold to be an abstraction when viewed from the standpoint of the social life at large, and hence no real exception to our general principle. The economic and the ethical situations differ, as types, only in the closeness of relation between the ends that are in conflict and in the manner in which the ends are first brought into conflict — not in respect of the intrinsic nature of the

ends which are involved in them.[1] It is this difference which, as we shall see, explains why ethical valuation must be of ends, and economic valuation, on the other hand, of means.

We have yet to see *in what way* valuation of the means of action can serve to resolve a difficulty of the type which has thus been designated as Economic. The question must be deferred until a more detailed analysis of the economic judgment-process can be undertaken. It is enough for our present purpose to note that the subject of valuation in this process *is* the means, and to see that under the typical conditions which have been described some further determination of the means than the merely physical one of their factual availability for the competing ends is needed.[2] Physically and mechanically the means are available for each one of the ends or groups of ends in question; the pressing problem is to determine for which one of the ends, if any, or to what compromise or readjustment of certain of the ends or all of them, the means at hand are in an economic sense most properly available.[3]

[1] Accordingly there can be no distinction of ends, some as ethical, others as economic, but from an ethical standpoint indifferent, and yet others as amenable neither to ethical nor to economic judgment. The type of situation and the corresponding mode of judgment employed determines whether an end shall be for the time being ethical, economic, or of neither sort conspicuously.

[2] The right of Prudence to rank among the virtues cannot, on our present view, be questioned. Economic judgment, though it must be valuation of means, is essentially choice of ends—and, as would appear, choice of a sort peculiarly difficult by reason of the usually slight intrinsic relation between the ends involved and also by reason of the absence of effective points of view for comparison. Culture, as Emerson remarks, "sees prudence not to be a several faculty, but a name for wisdom and virtue conversing with the body and its wants." And again, "The spurious prudence, making the senses final, is the god of sots and cowards, and is the subject of all comedy. . . . . [The true prudence] takes the laws of the world whereby man's being is conditioned, as they are, and keeps these laws that it may enjoy their proper good" (Essay on *Prudence*).

[3] Here again we purposely use inaccurate language. Strictly, the ends here spoken of as competing are such, we must say, only because they are as yet in a measure indeterminate, wanting in "clearness," and are not yet understood in their true economic character; likewise the means are wanting in that final shade or degree of physical and mechanical determinateness which they are presently to possess as means to a finally determinate economic end. Thus economic judgment, by which is to be understood determination of an end of action by the economic

From this preliminary discussion of the ethical and economic situations we must now pass to discuss the objectivity of the judgments by which the agent meets the difficulties which such situations as these present. We shall seek to show that these judgments are constructive of an objective order of reality. It will be necessary in the first place to determine the psychological conditions of the more commonly recognized experience of Objectivity in the restricted sphere of sense-perception. There might otherwise remain a certain antecedent presumption against the thesis which we wish to establish even after the direct argument had been presented.[1]

III

Common-sense and natural science certainly tend to identify the objectively real with the existent in space and time. The physical universe is held to be palpably real in a way in which nothing not presented in sensuous terms can be. To most minds doubtless it is difficult to understand why Plato should have ascribed to the Ideas a higher degree of reality than that possessed by the particular objects of sense-perception, and still more difficult to understand his ascription of real existence to such Ideas as those of Beauty, Justice, and the Good. There is a certain apparent stability in a universe presented in "immediate" sense-perception—a universe with which we are in constant bodily intercourse

method and in accordance with economic principles, involves in general physical re-determination of the means. The means which at the outset of the present economic judgment-process appear as physically available indifferently for either of the tentative ends under consideration are only in a general way the same means for knowledge as they will be when the economic problem has been solved. They are, so far as now determinate, the outcome of former physical judgment-processes incidental to the definition of economic ends in former situations like the present.

[1] In our discussion of this preliminary question there is no attempt to furnish what might be called an *analysis* of the consciousness of objectivity. This has been undertaken by various psychologists in recent well-known contributions to the subject. For our purpose it is necessary only to specify the intellectual and practical attitude out of which the consciousness of objectivity arises; not the sensory "elements" or factors involved in its production as an experience.

—that seems not to belong to a mere order of relations which, if known in any sense, is not known to us through the senses. Moreover, knowledge of the physical world is felt to possess a higher degree of certainty than does any knowledge we can have of supposed economic or moral truth, or of economic or moral standards. Of such knowledge one is disposed to say, as Mr. Spencer does of metaphysics, that at the best it presupposes a long and elaborate inferential process which, as long, is likely to be faulty; whereas physical truth is immediate or else, when inference is involved in it, easy to be tested by appeal to immediate facts. Physical reality is a reality that can be seen and handled and felt as offering resistance, and this is evidence of objectivity of a sort not to be found in other spheres of knowledge for which the like claim is made.

The force of these impressions (and it would not be difficult to find stronger statements in the history of scientific and ethical nominalism) diminishes if one tries to determine in what consists that objectivity which they uncritically assume as given in sense-perception. For one must recognize that not all our possible modes of sense-experience are equally concerned in the presentation of this perceived objective world. Certain sensory "quales" are immediately referred to outward objects as belonging to them. Certain others are, in a way, "inward," either not more definitely localized at all or merely localized in the sense-organ which mediates them. Now, the reason for this difference cannot lie in the content of the various sense-qualities abstractly taken. A visual sensation, apart from the setting in which it occurs in common experience, can be no more objective in its reference—indeed, can have no more reference of any kind—than the least definite and instructive organic sensation. For the degree of distinctness with which one discriminates sense-qualities depends upon the number and

importance of the interpretative associations which it is important from time to time to "connect" with them; or, conversely, the sense-qualities are not *self*-discriminating in virtue of an intrinsic objective reference or meaning which each possesses and which drives it apart from all the rest. Indeed, an intrinsic meaning, if a sensation could possess one, would not only be superfluous in the development of knowledge, but, as likely to be mistaken for the acquired or functional meaning, even seriously confusing.[1]

Now, it must be granted that, if the "simple idea of sensation" is without objective reference, no association with it of similarly abstract sensations can supply the lack. A "movement" sensation, or a tactual, having in itself no such meaning, cannot merely by being "associated" with a similarly meaningless visual sensation endow this latter with reference to an object. Objective reference is, in fact, not a sensuous thing; it is not a conscious "element," nor does it arise from any combination or fusion of such. It is neither *in* the association of ideas as a constituent member, nor does it belong to the association considered as a sequence of psychical states. Instead, in our present view, it belongs to or arises out of the activity through which and with reference

[1] So, on the other hand, our vague organic sensations are possibly more instructive as they are, *for their own purpose*, than they would be if more sharply discriminated and complexly referred.

For convenience we here meet the view under consideration with its own terminology; we by no means wish to be understood as indorsing this terminology as psychologically correct. The sense-quality of which we read in "structural psychology" is, we hold, not a structural unit at all, but in fact a highly abstract development out of that unorganized whole of sensory experience in which reflective attention begins. There is, for example, no such thing as the simple unanalyzable sense-quality "red" in consciousness until judgment has proceeded far enough to have constructed a definite and measured experience which may be symbolized as "object-before-me-possessing-the-attribute-red." In place of the original sensory total-experience we now have a more or less developed perceptual (*i. e.*, judgmental) total-experience. It is an instance of the "psychological fallacy" to interpret what are really elements of *meaning* in a perceived object constructed in judgment (for this is the true nature of the "simple idea of sensation" or "sense-element") as so many bits of psychical material which were isolated from each other at the outset, and have been externally joined together in their present combination.

to which associations are first of all established. It is an aspect or kind of reference or category under which any sense-quality or datum is apperceived when it is held apart from the stream of consciousness in order that it may receive new meaning as a stimulus ; and a sensation functioning in such a "state of consciousness"[1] is a psychical phenomenon very different from the conscious element of "analytical" psychology. The extent to which it is true that the objective world of sense-perception is pre-eminently visual and tactual is then merely an evidence of the extent to which the exigencies of the life-process have required finer sense-discrimination for the sake of more refined reaction within these spheres as compared with others. Our conclusion, then, must be that the consciousness of objectivity is not as such sensuous, even as given in our perception of the material world. The world, as viewed from the standpoint of a particular, practical emergency, is an objective world, not in virtue of its having a "sensuous" or a "material" aspect as something existent *per se*, but because it is a world of stimuli in course of definition for the guidance of activity.[2]

It will be well to give further positive exposition of the meaning of the view thus stated. To return once more to

[1] The phrase is Külpe's and is used in his sense of consciousness taken as a whole, as, for example, attentive, apperceptive, volitional, rather than in the sense made familiar by Spencer and others.

[2] The foregoing discussion is in many ways similar to Brentano's upon the same subject. In discussing his first class of modes of consciousness, the *Vorstellungen*, he says: "We find no contrasts between presentations excepting those of the objects to which the presentations refer. Only in so far as warm and cold, light and dark, a high note and a low, form contrasts can we speak of the corresponding presentations as contrasted; and, in general, there is in any other sense than this no contrast within the entire range of these conscious processes" (*Psychologie vom empirischen Standpunkte*, Bd. I, p. 29). This may stand as against any attempt to find contrast between abstract sense-qualities taken apart from their objective reference. What is, however, the ground of distinction between the presented objects? Apparently this must be answered in the last resort as above. In this sense we should need finally to interpret "sensuous" and "material" in terms of objectivity as above defined, rather than the reverse. They are cases in or specifications of the determination of adequate stimuli.

our fundamental psychological conception, knowledge is essentially relevant to the solution of particular problems of more or less urgency and of various kinds and figures in the solution of such problems as the assemblage of consciously recognized symbols or stimuli by which various actions are suggested. The object as known is therefore not the same as the object as apprehended in other possible modes of being conscious of it. The workman who is actually using his tool in shaping his material, or the warrior who is actually using his weapon in the thick of combat, is, if conscious of these objects at all (and doubtless he may be conscious of them at such times), not conscious of them *as objects*—as the one might be, for example, in adjusting the tool for a particular kind of use, and the other in giving a keen edge to his blade. Under these latter circumstances the tool or weapon is an *object*, and its observed condition, viewed in the light of a purpose of using the object in a certain way, is regarded as properly suggesting certain changes or improvements. And likewise will the tool or the weapon have an objective character in the agent's apprehension in the moment of identifying and selecting it from among a number of others, or even in the act of reaching for it, especially if it is inconveniently placed. But in the act of freely using one's objective means the category of the objective plays no part in consciousness, because at such times there is no judgment respecting the means—because there is no sufficient occasion for the isolation of certain conscious elements from the rest of the stream of conscious experience to be defined as stimuli to certain needed responses. Such isolation will not normally take place so long as the reactions suggested by the conscious contents involved in the experience are fully adequate to the situation. Objects are not normally held apart as such from the stream of consciousness in which they are presented and recognized as possess-

ing qualities warranting certain modes of conduct, excepting as it has become necessary to the attainment of the agent's purposes to modify or reconstruct his activity.[1]

Are things, then, apprehended as objective in virtue of the agent's attitude toward them, or is the agent's attitude in a typical case grounded upon an antecedent determination of the objectivity of the things in question? We must answer, in the first place, that there can be no such antecedent determination. We may, it is true, speak of believing, on the evidence of sight or touch, that a certain object is really present before us. But neither sight nor touch possesses in itself, as a particular sense-quality, any objective meaning. If touch is *par excellence* the sense of the objective and the appeal to touch the test of objectivity, this can only be because touch is the sense most closely and intimately connected in our experience with action. After any interval of hesitation and judgment, action begins with contact with and manipulation of the physical means which have been under investigation. Not only is touch the proximate stimulus and guide to manipulation, but all relevant knowledge which has been gained in any judgment-process, through the other senses, and especially through sight, must ultimately be reducible to terms of touch or other contact sense. The alleged tactual evidence of objectivity is, then, rather a confirmation than a difficulty for our present view. In short, we must dismiss as impossible the hypothesis that there can be a consciousness of objectivity which is not dependent upon and an expression of primary antecedent tendencies toward motor response to the presented stimulus. It is our attitude toward the prospective stimulus that mediates the consciousness of an object standing over against us.

So far, indeed, is it from being true that objectivity is a

[1] In this connection reference may be made to the well-known disturbing effect of the forced introduction of attention to details into established sensori-motor co-ordinations, such as "typewriting," playing upon the piano, and the like.

matter for special determination antecedently to action that by common testimony the conviction of objectivity comes to us quite irresistibly. The object forces itself upon us, as we say, and "whether we will or no" we must recognize its presence there before us and its independence of any choice of ours or of our knowledge. In the cautious manipulation of an instrument, in the laborious shaping of some refractory material, in the performance of any delicate or difficult task, one's sense of the objectivity of the thing with which one works is as obtrusive as remorse or grief, and as little to be shaken off. We shall revert to this suggested analogy at a later stage in our discussion.

We are now in a position to define more precisely the nature of the conditions in which the sense of objectivity emerges, and this will bring us to the point at which the objective import of our economic and ethical judgments can profitably be discussed. We have said that the world of the physical is objective, not in virtue of the sensuous terms in which it is presented, but because it is a world of stimuli for the guidance of human conduct. Under what circumstances, then, are we conscious of stimuli in their capacity of guides or incentives or grounds of conduct? And the answer must be that stimuli are interpreted as such, and so take on the character of objectivity, when their precise character as stimuli is still in doubt, and they must therefore receive further definition.

For example, a man pursued by a wild beast must find some means of escape or defense, and, seeing a tree which he may climb or a stone which he may hurl, will inspect these as well as may be with reference to their fitness for the intended purpose. It is at just such moments as these, then, that physical things become things for knowledge and take on their stubbornly objective character—that is to say, when they are essentially problematic. Now, in order that

any physical thing may be thus problematic and so possess objective character for knowledge, it must (1) be in part understood, and so prompt certain more or less indiscriminate responses; and (2) be in part as yet not understood — in such wise that, while there are certain indefinite or unmeasured tendencies on the agent's part to respond to the object — climb the tree or hurl the stone — there is also a certain failure of complete unity in the co-ordination of these activities, a certain contradiction between different suggestions of conduct which different observed qualities of the tree or stone may give, and so hesitation and arrest of final action. The pursued man views the tree suspiciously before trusting himself to its doubtful strength, or weighs well the stone and tests its rough edges before pausing to throw it. Thus, to state the matter negatively, there are two possible situations in which the sense of objectivity, if it emerge into consciousness at all, cannot long continue. An object — as, for example, some strange shrub or flower — which, in the case we are supposing, may attract the pursued wayfarer's notice, may awaken no responses relevant to the emergency in which the agent finds himself; and it will therefore forthwith lapse from consciousness. Or, on the other hand, the object, as the tree or stone, may rightly or wrongly seem to the agent so completely satisfactory, or, rather, in effect may *be* so, as instantly to prompt the action which otherwise would come, if at all, only after a period of more or less prolonged attention. In neither of these cases, then, is there a problematic object. In the one the thing in question is wholly apart from any present interest, and therefore lapses. In the other case the thing seen is comprehended on the instant with reference to its general use and merges immediately into the main stream of the agent's consciousness without having been an object of express attention. In neither case, therefore, is there hesitation

with reference to the thing in question—any conflict between inconsiderate positive responses prompted by certain features of the object and inhibitions due to recognition of its shortcomings. In a word, in neither case is there any judgment or possibility of judgment, and hence no sense of objectivity. We can have consciousness of an object, in the strict sense of the term, only when some part or general aspect of the total situation confronting an agent excites or seems to warrant responses which must be held in check for further determination. In terms of consciousness, an object is always an object of attention—that is, an object which is under process of development and reconstruction with reference to an end.

An inhibited impulse to react in a more or less definite way to a stimulus is, then, the adequate condition of the emergence in consciousness of the sense of objectivity. So long as an activity is proceeding without check or interruption, and no conflict develops between motor responses prompted by different parts or aspects of the situation, the agent's consciousness will not present the distinction of Objective and Subjective. The mode of being conscious which accompanies free and harmonious activity of this sort may be exemplified by such experiences as æsthetic appreciation, sensuous enjoyment, acquiescent absorption in pleasurable emotion, or even intellectual processes of the mechanical sort, such as easy computation or the solution of simple algebraic problems—processes in which no more serious difficulty is encountered than suffices to stimulate a moderate degree of interest. If, however, reverting to the illustration, our present need for a stone calls for some property which the stone we have seized appears to lack, consciousness must pass over into the reflective or attentive phase. The stone will now figure as an *object* possessing certain qualities which render it in a general way relevant to the emergency before

us. A needed quality is missing, and this defect must hold in check all the imminent responses until discovery of the missing quality can set them free. In a word, the stone as known to us has assumed the station of subject in a judgment-process, and our effort is, if possible, to assign to it a new predicate relevant to our present situation. Psychologically speaking, the stone is an object, a stimulus to which we are endeavoring to find warrant for responding in some new or reconstructed way.

In this process we must assume, then, first of all, an interest on the agent's part in the situation as a whole, which in the first place, in terms of the illustration, makes the pursued one note the tree or stone — which might otherwise have escaped his notice as completely as any passing cloud or falling leaf — and suggests what particular qualities or adaptabilities should be looked for in it. Given this interest in "making something" out of the total situation as explaining the recognition of the stone and the impulse to seize and hurl it, we find the sense of the stone's objectivity emerging just in the arrest of the undiscriminating impulse. The stone must have a certain meaning as a stimulus first of all, but it must be a meaning not yet quite defined and certain of acceptance. The stone will be an *object* only if, and so long as, the undiscriminating impulses suggested by these elements of meaning are held in check in order that they may be ordered, supplemented, or made more definite. It is, then, the essence of the present contention that physical things are *objective* in our experience in virtue of their recognized inadequacy as means or incentives of action — an inadequacy which, in turn, is felt as such in so far as we are seeking to use them as means or grounds of conduct, or to avail ourselves of them as conditions, in coping with the general situation from which our attention has abstracted them.

From this analysis of the conditions of the consciousness of objectivity we must now proceed to inquire whether in the typical ethical and economic situations, as they have been described, essentially these same conditions are present.

In the ethical situation, according to our statement, the subject of the judgment (the object of attention) is the new end which has just been presented in imagination, and we have now to see that the agent's attitude toward this end is for our present purpose essentially the same as toward a physical object which is under scrutiny. For just as the physical object is such for consciousness because it is partly relevant (whether in the way of furthering or of hindering) to the agent's purpose, but as yet partly not understood from this point of view, so the imaged end may likewise be ambiguous. The agent's moral purpose may be the (very likely mythical) primitive one of which we read in "associational" discussions of the moral consciousness—that of avoiding punishment. It may be that of "imitative," sympathetic obedience to authority—a sentiment whose fundamental importance for ethical psychology has long remained without due recognition.[1] It may be loyalty to an ideal of conscience, or yet again a purpose of enlargement and development of personality. But on either supposition the compatibility of the end with the prevailing standard or principle of decision may be a matter of doubt and so call for judgment. The problem will, of course, be a problem in the full logical sense as involving judgment of the type described in our discussion of the ethical situation only when the attitudes of obedience to authority and to fixed ideals have been outgrown; but, on the other hand, as might be shown, it is just the inevitable increasing use of judgment with reference to these formulations of the moral life which gradually

[1] *Cf.* PROFESSOR BALDWIN'S *Social and Ethical Interpretations*, and PROFESSOR MCGILVARY'S recent paper on "Moral Obligation," *Philosophical Review*, Vol. XI, especially pp. 349 f.

undermines them and, by a kind of "internal dialectic" of the moral consciousness, brings the agent to recognition as well as to more perfect practice of a logical or deliberative method.

The end, then, is, in the typical ethical situation, an *object* which one must determine by analysis and reconstruction as a means or condition of moral "integrity" and progress. It is, accordingly, in the second place, an object upon whose determination a definite activity of the agent is regarded by him as depending. Just as in the physical judgment-process the object is set off over against the self and regarded as a given thing which, when once completely defined, will prompt certain movements of the body, so here the contemplated act is an object which, when fully defined in all its relevant psychological and sociological bearings, will prompt a definite act of rejection or acceptance by the self. Now, it might be shown, as we believe, that the complete psychological and sociological definition of the course of conduct *is* in truth the full explanation of the choice; there is no *separate* reaction of the moral self to which the course of conduct is, as defined, an external stimulus. So also in the sphere of physical judgment complete definition passes over into action — or the appreciative mode of consciousness which accompanies action — without breach of continuity. But within the judgment-process in all its forms there is in the agent's apprehension this characteristic feature of apparent separation between the subject as an objective thing presently to be known and used or responded to, and the predicate as a response yet to be perfected in details, but at the right time, when one has proper warrant, to be set free. It is not our purpose here to speak of metaphysical interpretations or misinterpretations of this functional distinction; but only to argue from the presence of the distinction in the ethical type of judgment as in the physical as

genuine an objectivity for the ethical type as can be ascribed to the other. The ethical judgment is objective in the sense that in it an object—an imaged mode of conduct taken as such—is presented for development to a degree of adequacy at which one can accept it or reject it as a mode of conduct. The ethical predicates Right and Wrong, Good and Bad, each pair representing a particular standpoint, as we shall later see, signify this accepting or rejecting movement of the self, this "act of will," of which, as an act in due time to be performed, the agent is more or less acutely conscious in the course of moral judgment.

In the economic situation also, as above described, there is present the requisite condition of the consciousness of objectivity. Here, as in the ethical situation, an object is presented which one must redetermine, and toward which one must presently act in a way likewise to be determined in detail in judgment. We shall defer until a later stage discussion of the reason why this subject of the economic judgment is the *means* in the activity that is in progress. We are not yet ready to show that the means *must* be the center of attention under the conditions which have been specified. Here we need only note the fact of common experience that economic judgment does center upon the means, and show that in this fact is given the objective status of the means in the judgment-process; for the economic problem is essentially that of withdrawing a portion, a "marginal increment," of the means from some use or set of uses to which they are at present set apart, and applying it to the new end that has come to seem, on ethical grounds at least, desirable; and we may regard this diversion as the essentially economic act which, in the agent's apprehension during judgment, is contingent upon the determination of the means. The object as economic is accordingly the means, or a marginal portion of the means, which is to be thus diverted (or, so to speak,

exposed to the likelihood of such diversion), and its determination must be of such a nature as to show the economic urgency, or at least the permissibility, of this diversion. Into this determination, manifestly, the results of much auxiliary inquiry into physical properties of the means must enter—such properties, for example, as have to do with its technological fitness for its present use as compared with possible substitutes, and its adaptability for the new use proposed. Taking the word in the broad sense of *object of thought*, it is always an object in space and time to which the economic judgment assigns an economic value; and it is true here (just the same is true, *mutatis mutandis*, of the psychological and sociological determinations necessary to the fixation of ethical value) that the *economically motivated* physical determination of the objective means from the standpoint of the emergency in hand is the full "causal" explanation of the economic act. It must, however, be carefully observed that this physical determination is in the typical case altogether incidental, from the agent's standpoint, to the assignment of an economic character or value to the means—a value which will at the close of the judgment come to conscious recognition. As we shall see, the process is directed throughout by reference to economic principles and standards, and what shall be an adequate determination in the case depends upon the precision with which these are formulated and the strenuousness with which they are applied. In a word, the economic judgment assigns to the physical object, as known at the outset, a new non-physical character. Throughout the judgment-process this character is gaining in distinctness, and at the end it is accepted as the Value of the means, as warrant for the diversion of them to the new use which has been decided on.[1]

[1] Manifestly, as indicated just above, this accepted value of the object implies fuller physical knowledge of the object than was possessed at the outset of the economic judgment. See above, p. 234, note; p. 246, note 3; and p. 271, below.

We have now to consider whether in the actual ethical and economic experience of men there is any direct evidence confirming the conclusions which our logical analysis of the respective situations would appear to require. Can any phases of the total experience of working out a satisfactory course of conduct in these typical emergencies be appealed to as actually showing at least some tacit recognition that these types of judgment present each one an order of reality or an aspect of the one reality?

In the first place, then, one must recognize that in the agent's own apprehension a judgment of value has something more than a purely subjective meaning. It is never offered, by one who has taken the trouble to work it out more or less laboriously and then to express it in terms which are certainly objective, as a mere announcement of *de facto* determination or a registration of arbitrary whim and caprice. One no more means to announce a groundless choice or a choice based upon pleasure felt in contemplation of the imaged end than in his judgments concerning the physical universe he means to affirm coexistences and sequences, agreements and disagreements, of "ideas" as psychical happenings. That there is an ethical or economic truth to which one can appeal in doubtful cases is, indeed, the tacit assumption in all criticism of another's deliberate conduct; the contrary assumption, that criticism is merely the opposition of one's own private prejudice or desire to the equally private prejudice or desire of another, would render all criticism and mutual discussion of ethical problems meaningless and futile in the plain man's apprehension as in the philosopher's. For the plain man has a spontaneous confidence in his knowledge of the material world which makes him look askance at any alleged analysis of his sense-perceptions and scientific judgments into "associations of ideas," and the same confidence, or something very like it,

attaches to judgments of these other types. It may perhaps be easier (though the concession is a very doubtful one) to destroy a naïve confidence in the objectivity of moral truth than a like confidence in scientific knowledge, but it must be remembered that the plain man's sense of the urgency, at least of ethical problems, if not of economic, is commonly less acute than for the physical. In the plain man's experience serious moral problems are infrequent — problems of the true type, that is, which cannot be disposed of as mere cases of temptation; one must have attained a considerable capacity for sympathy and a considerable knowledge of social relations before either the recognition of such problems or proper understanding of their significance is possible. Moral and economic crises are not vividly presented in sensuous imagery excepting in minds of developed intelligence, experience, and imaginative power; and the judgments reached in coping with them do not, as a rule, obviously call for nicely measured, calculated, and adjusted bodily movements. The immediate act of executing an important economic judgment may be a very commonplace performance, like the dictation of a letter, and an ethical decision may, however great its importance for future overt conduct, be expressed by no immediate visible movements of the body. But this possible difference of impressiveness between physical and other types of judgments is from our present standpoint unessential; and indeed, after all, it cannot be denied that there are persons whose sense of moral obligation is quite as distinct and influential, and even sensuously vivid, as their conviction of the real existence of an external world. To the average man it certainly is clear that, as Dr. Martineau declares, "it is an inversion of moral truth to say . . . . that honour is higher than appetite *because* we feel it so; we feel it so because it *is* so. This '*is*' we know to be not contingent on our apprehension, not to arise from our

constitution of faculty, but to be a reality irrespective of us in adaptation to which our nature is constituted, and for the recognition of which the faculty is given."[1] And the impressiveness, to most minds, of likening the sublimity of the moral law to the visible splendor of the starry heavens would seem to suggest that the apprehension of moral truth is a mode of consciousness, in form at least, so far akin to sense-perception as to be capable of illustration and even reinforcement from that type of experience.

At this point we must revert to a suggestion which presented itself above in another connection, but which at the time could not be further developed. This was, in a word, that there is often a feeling of *obtrusiveness* in our appreciation of the objectivity of the things before us in ordinary sense-perception (or physical judgment) which is not unlike the felt insistence of remorse and grief.[2] This feeling is so conspicuous a feature of the state of consciousness in physical judgment as frequently to serve the plain man as his last and irrefragable evidence of the metaphysical independence of the material world, and it is indeed a feature whose explanation does throw much light upon the meaning of the consciousness of objectivity as a factor within experience. Now, there is another common feeling — or, as we do not scruple to call it, another emotion — which is perhaps quite as often appealed to in this way; though, as we believe, never in quite the same connection in any argument in which the two experiences are called upon to do service to the same end. Material objects, we are told, are *reliable* and *stable* as distinguished from the fleeting illusive images of a dream — they have a "solidity" in virtue of which one can "depend upon them," are "hard and fast" remaining faithfully where one deposits them for future use or, if they change and disappear, doing so in accordance with fixed

[1] *Types of Ethical Theory*, Vol. II, p. 5.

[2] See p. 253 above.

laws which make the changes calculable in advance. The material realm is the realm of "solid fact" in which one can work with assurance that causes will infallibly produce their right and proper effects, and to which one willingly returns from the dream-world in which his adversary, the "idealist," would hold him spellbound. We propose now briefly to consider these two modes of apprehension of external physical reality in the light of the general analysis of judgment given above — from which it will appear that they are, psychologically, emotional expressions of what have been set forth as the essential features of the judgment-situation, whether in its physical, ethical, or economic forms. From this we shall argue that there should actually be in the ethical and economic spheres similar, or essentially identical, "emotions of reality," and we shall then proceed to verify the hypothesis by pointing to those ethical and economic experiences which answer the description.

We have seen that the center of attention or subject in the judgment-process is as such problematic — in the sense that there are certain of its observed and recognized attributes which make it in some sense relevant and useful to the purpose in hand, while yet other of its attributes (or absences of certain attributes) suggest conflicting activities. The object which one sees is certainly a stone and of convenient size for hurling at the pursuing animal. The situation has been analyzed and found to demand a missile, and this demand has led to search for and recognition of a stone. The stone, however, may be of a color suggesting a soft and crumbling texture, or its form may appear from a distance to be such as to make it practically certain to miss the mark, however carefully it may be aimed and thrown. Until these points of difficulty have been ascertained, the stone is wanting still in certain essential determinations. So far as it has been certainly determined, it prompts to the response directly

suggested by one's general end of defense and escape, but there are these other indications which hold this response in check and which, if verified, will cause the stone to be let lie unused. Now, we have, in this situation of conflict or tension between opposed incitements given by the various discriminated characters of the object, the explanation of the aspect of obtrusiveness, of arbitrary resistance to and independence of one's will, which for the time being seems the unmistakable mark or coefficient of the thing's objectivity. For it is not the object as a whole that is obtrusive; indeed, clearly, there could be no obtrusiveness on the part of an "object as a whole," and in such a case there could also be no judgment. The obtrusion in the case before us is not a sense of the energy of a recalcitrant metaphysical object put forth upon a coerced and helpless human will, but simply a conscious interpretation of the inhibition of certain of the agent's motor tendencies by certain others prompted by the object's "suspicious" and as yet undetermined appearances or possible attributes. The object as amenable to use—those of its qualities which taken by themselves are unquestionable and clearly conducive to the agent's purpose—needs no attention for the moment, let us say. The attention is rather upon the dubious and to all appearance unfavorable qualities, and these for the time being make up the sum and content of the agent's knowledge of the object. On the other hand, the agent as an active self is identified with the end and with those modes of response to the object which promise to contribute directly to its realization. It is in this direction that his interest is set and he strains with all his powers of mind to move, and it is upon the self as identified with, and for the time being expressed in, the "effort of the agent's will" that the object as resistant, refusing to be misconstrued, obtrudes. One *must* see the object and *must* acknowledge its apparent, or in the end

its ascertained, unfitness. One is "coerced." The situation is one of conflict, and it is out of the conflict that the essentially emotional experience of "resistance" emerges.[1] The the more special emotions of impatience, anger, or discouragement may in a given case not be present or may be suppressed, but the emotion of objectivity will still remain.[2]

On the same general principles the other of our two coefficients of reality may be explained. Let us assume that the stone in our illustration has at last been cleared of all ambiguity in its suggestion, having been taken as a missile, and that the man in flight now holds it ready awaiting the most favorable moment for hurling it at his pursuer. It will hardly be maintained that under these conditions the coefficient of the stone's reality as an object consists in its obtrusiveness, in its resistance to or coercion of the self. The stone is now regarded as a fixed and determinate feature of the situation — a condition which can be counted on, whatever else may fail. Over against other still uncertain aspects of the situation (which are now in *their* turn real because resistant, coercive, and obtrusive) stands the stone as a reassuring fact upon and about which the agent can build up the whole plan of conduct which may, if all goes well, bring him safely out of his predicament. The stone has, so to speak, passed over to the "end" side of the situation, and although it may have to be rejected for some other

[1] It is not so much the case that the object, on the one side, excites in the agent's consciousness, on the other, the "sensations of resistance" which have played such a part in recent controversy on the subject, as that (1) the object in certain of its promptings is "resisting" certain other of its promptings, or that (2) certain "positive" activities of the agent are being inhibited by certain "negative" activities, thereby giving rise to the "emotion of resistance." That "positive" and "negative" are here used in a teleological way will be apparent. It is surely misleading to speak of "*sensations* of resistance" even in deprecatory quotation marks, except as "sensation" is used in its everyday meaning, viz., experience of strongly sensory quality.

[2] The general theory of emotion which is here presupposed, and indeed is fundamental to the entire discussion, may be found in PROFESSOR DEWEY'S papers on "The Theory of Emotion," *Psychological Review*, Vol. I, p. 553; Vol. II, p. 13.

means of defense, as the definition of the situation proceeds and the plan of action accordingly changes (as in some degree it probably must), nevertheless for the time being the imaged activities as stimulus to which the stone is now accepted are a fixed part of the plan and guide in further judgment of the means still undefined. The agent can hardly recur to the stone, when, after attending for a time to the bewildering perplexities of the situation, he pauses once more to take an inventory of his certain resources, without something of an emotional thrill of assurance and encouragement. In this emotional appreciation of the "solidity" and "dependability" of the object the second of our coefficients of reality consists. This might be termed the Recognition, the other the Perception, coefficient. Classifying them as emotions, because both are phenomena of tension in activity, we should group the Perception coefficient with emotions of the Contraction type, like grief and anger, and the Recognition coefficient with the Expansion emotions, like joy and triumph.

Now, in the foregoing interpretation no reference has been made to any conditions peculiar to the physical type of judgment-situation. The ground of explanation has been the feature of arrest of activity for the sake of reconstruction, and this, if our analyses have been correct, is the essence of the ethical and economic situations as well as of the physical. Can there then be found in these two spheres experiences of the same nature and emerging under the same general conditions as our Perception and Recognition coefficients of reality? If so, then our case for the objective significance and value of ethical and economic judgment is in so far strengthened. (1) In the first place, then, the object in its economic character is problematic, assuming a desire on the agent's part to apply it, as means, to some new or freshly interesting end, because it has already been, and accordingly now is, set apart for other uses and cannot

thoughtlessly be withdrawn from them. Extended illustration is not needed to remind one that these established and hitherto unquestioned uses will haunt the economic conscience as obtrusively and inhibit the desired course of economic conduct with as much energy of resistance as in the other case will any of the contrary promptings of a physical object. Moreover, the Recognition coefficient may as easily be identified in this connection. If one's scruples gain the day, in such a case one has at least a sense of comforting assurance in the conservatism of his choice and its accordance with the facts, however unreconciled in another way one may be to the deprivation that has thus seemed to be necessary. If, however, the new end in a measure makes good its case and the modes of expenditure which the "scruples" represented have been readjusted in accordance with it, then the means, no less than before the new interpretation had been placed upon them, will enjoy the status of Reality in the economic sense. They will be real now, however, not in the obtrusive way, as presenting aspects which inhibit the leading tendency in the judgment-process, but, instead, as means having a fixed and certain character in one's economic life, which, after the hesitation and doubt just now superseded, one may safely count upon and will do well to keep in view henceforth. (2) In the second place, mere mention of the corresponding ethical experiences must suffice, since only extended illustration from literature and life would be fully adequate: on the one hand, the "still small voice" of Conscience or the authoritativeness of Duty, "stern daughter of the voice of God;" and, on the other, the restful assurance with which, from the vantage-ground of a satisfying decision, one may look back in wonder at the possibility of so serious a temptation or in rejoicing over the new-won freedom from a burdensome and repressive prejudice.

This must for the present serve as positive exposition of

our view as to the objective significance of the valuational types of judgment. There are certain essential points which have as yet not been touched upon, and there are certain objections to the general view the consideration of which will serve further to explain it; but the discussion of these various matters will more conveniently follow the special analysis of the valuational judgments, to which we shall now proceed.

IV

In the last analysis the ultimate motive of all reflective thought is the progressive determination of the ends of conduct. Physical judgment, or, in psychological terms, reflective attention to objects in the physical world, is at every turn directed and controlled by reference to a gradually developing purpose, so that the process may also be described as one of bringing to fulness of definition an at first vaguely conceived purpose through ascertainment and determination of the means at hand. The problematic situation in which reflection takes its rise inevitably develops in this two-sided way into consciousness of a definite end on the one side, and of the means or conditions of attaining it on the other.

It has been shown that there *may* be involved in any finally satisfactory determination of a situation an explicit reflection upon and definition of the controlling end which is present and gives point and direction to the physical determination. But very often such is not the case. When a child sees a bright object at a distance and makes toward it, availing himself more or less skilfully of such assistance as intervening articles of furniture may afford, there is of course no consciousness on his part of any definite purpose as such, and this is to say that the child does not subject his conduct to criticism from the standpoint of the value of its ends. There is simply strong desire for the distant red ball,

controlling all the child's movements for the time being and prompting a more or less critical inspection of the intervening territory with reference to the easiest way of crossing it. The purpose is implicitly accepted, not explicitly determined, as a preliminary to physical determination of the situation. If one may speak of a development of the purpose in such a case as this, one must say that the development into details comes through judgment of the environing conditions. To change the illustration in order not to commit ourselves to the ascription of too developed a faculty of judgment to the child, this is true likewise of any process of reflective attention in the mind of an adult in which a general purpose is accepted at the outset and is carried through to execution without reflection upon its ethical or economic character as a purpose. The specific purpose as executed is certainly not the same as the general purpose with which the reflective process took its rise. It is filled out with details, or may perhaps even be quite different in its general outlines. There has necessarily been development and perhaps even transformation, but our contention is that all this has been effected in and through a process of judgment in which the conditions of action, and not the purpose itself, have been the immediate objects of determination. Upon these the attention has been centered, though of course the attention was directed to them by the purpose. To state the case in logical terms, it has been only through selection and determination of the means and conditions of action from the standpoint of predicates suggested by the general purpose accepted at the outset that this purpose itself had been rendered definite and practical and possible of execution. Probably such cases are seldom to be found in the adult experience. As a rule, the course of physical or technological judgment will almost always bring to light implications involved in the accepted purpose which must

inevitably raise ethical and economic questions; and the resolution of these latter will in turn afford new points of view for further physical determination of the situation. In such processes the logical points of the problem of ethical and economic valuation come clearly into view.

In our earlier account of the matter it was more convenient to use language which implied that ethical and economic judgment must be preceded by implicit or explicit acceptance of a definite situation presented in sense-perception, and that these evaluating judgments could be carried through to their goal only upon the basis of such an inventory of fixed conditions. Thus the ultimate ethical quality of the general purpose of building a house would seem to depend upon the precise form which this purpose comes to assume after the actual presence and the quality of the means of building have been ascertained and the economic bearings of the proposed expenditure have been considered. Surely it is a waste of effort to debate with oneself upon the ethical rightness of a project which is physically impossible or else out of the question from the economic point of view. We are, however, now in a position to see that this way of looking at the matter is both inaccurate and self-contradictory. In the actual development of our purposes there is no such orderly and inflexible arrangement of stages; and if it is a waste of effort to deliberate upon a purpose that is physically impossible, it may, with still greater force, be argued that we cannot find, and judge the fitness of, the necessary physical means until we know what, precisely, it is that we wish to do. The truth is that there is constant interplay and interaction between the various phases of the inclusive judgment-process, or rather, more than this, that there is a complete and thoroughgoing mutual implication. It is indeed true that our ethical purposes cannot take form in a vacuum apart from consideration of their physical

and economic possibility, but it is also true that our physical and economic problems are ultimately meaningless and impossible, whether of statement or of solution, except as they are interpreted as arising in the course of ethical conflict.

We have, then, to do, in the present division, with situations in which, whether at the outset or from time to time during the course of the reflective process, there is explicit conflict between ends of conduct. These situations are the special province of the judgment of valuation. Our line of argument may be briefly indicated in advance as follows:

1. The judgment of valuation, whether expressed in terms of the individual experience or in terms of social evolution, is essentially the process of the explicit and deliberate resolution of conflict between ends. As an incidental, though nearly always indispensable, step to the final resolution of such conflict, physical judgment, or, in general, the judgment of fact or existence, plays its part, this part being to define the situation in terms of the means necessary for the execution of the end that is gradually taking form. The two modes of judgment mutually incite and control each other, and neither could continue to any useful purpose without this incitement and control of the other. Both modes of judgment are objective in content and significance. At the end of the reflective process and immediately upon the verge of execution of the end or purpose which has taken form the result may be stated or apprehended in either of two ways: (1) directly, in terms of the end, and (2) indirectly, in terms of the ordered system of existent means which have been discovered, determined, and arranged. If such final survey of the result be taken by way of preparation for action, or for whatever reason, the end will be apprehended as possessing ethical value and the means, under conditions later to be specified, as possessing economic value.

2. What then is the nature and source of this apprehension of end or means as valuable? The consciousness of end or means as valuable is an emotional consciousness expressive of the agent's practical attitude as determined in the just completed judgment of ethical or economic valuation and arising in consequence of the inhibition placed upon the activities which constitute the attitude by the effort of apprehending or imaging the valued object. Ethical and economic value are thus strictly correlative; psychologically they are emotional incidents of apprehending in the two respective ways just indicated the same total result of the inclusive complex judgment-process. Finally, as the moment of action comes on, the consciousness of the ethically valued end lapses first; then the consciousness of economic value is lost in a purely "physical," *i. e.*, technological, consciousness of the means and their properties and interrelations in the ordered system which has been arranged; and this finally merges into the immediate and undifferentiated consciousness of activity as use of the means becomes sure and unhesitating.

When we say that the ends which oppose each other in an ethical situation (that is, a situation for the time being seen in an ethical aspect) are related, and the ends in an economic situation are not, we by no means wish to imply that in the one case we have in this fact of relatedness a satisfactory solution at hand which is wanting in the other. To feel, for example, that there is a direct and inherent relationship between a cherished purpose of self-culture and an ideal of social service which seems now to require the abandonment of the purpose does not mean that one yet knows just *how* the two ends should be related in his life henceforth; and again, to say that one can see no inherent relation between a desire for books and pictures and the need of food, excepting in so far as both ends depend for their realization upon a limited supply of means,

is not to say that the issue of the conflict is not of ethical significance. Such a view as we here reject would amount to a denial of the possibility of genuinely problematic ethical situations[1] and would accord with the opinion that economic judgment as such lies apart from the sphere of ethics and is at most subject only to occasional revision and control in the light of ethical considerations.

By the relatedness of the ends in a situation we mean the fact, more or less explicitly recognized by the agent, that the new, and as yet undefined, purpose which has arisen belongs in the same system with the end, or group of ends, which the standard inhibiting immediate action represents. The standard inhibits action in obedience to the impulse that has come to consciousness, and the image of the new end is, on its part, definite and impressive enough to inhibit action in obedience to the standard. The relatedness of the two factors is shown in a practical way by the fact that, in the first instance at least, they are tacitly expected to work out their own adjustment. By the process already described in outline, subject and predicate begin to develop and thereby to approach each other, and a provisional or partial solution of the problem may thus be reached without resort to any other method than that of direct comparison and adjustment of the ends involved on either side. The standard which has been called in question has enough of congruence with the new imaged purpose to admit of at least some progress toward a solution through this method.

We can best come to an understanding of this recognition of the relatedness of the ends in ethical valuation by pausing to examine somewhat carefully into the conditions involved in the acceptance or reflective acknowledgment of a defined end of conduct as being one's own. Any new end

[1] Such is, in fact, the teaching of the various forms of ethical intuitionism, and we find it not merely implied, but explicitly affirmed, in a work in many respects so remote from intuitionism in its standpoint as GREEN'S *Prolegomena to Ethics*. See pp. 178–81, and especially pp. 355–9.

in coming to consciousness encounters some more or less firmly established habit represented in consciousness by a sign or symbolic image of some sort, the habit being itself the outcome of past judgment-process. Our present problem is the significance of the agent's recognition of a relatedness between his new impulsive end and the end which represents the habit, and we shall best approach its solution by considering the various factors and conditions involved in the agent's conscious recognition of the established end as being such.

In any determinate end there is inevitably implied a number of groups of factual judgments in which are presented the objective conditions under which execution of the end or purpose must take place. There is in the first place a general view of environing conditions, physical and social, presented in a group of judgments (1) descriptive of the means at hand, of the topography of the region in which the purpose is to be carried out, of climatic conditions, and the like, and (2) descriptive of the habits of thought and feeling of the people with whom one is to deal, their prejudices, their tastes, and their institutions. The project decided on may, let us say, be an individual or a national enterprise, whether philanthropic or commercial, which is to be launched in a distant country peopled by partly civilized races. In addition to these groups of judgments upon the physical and sociological conditions under which the work must proceed, there will also be a more or less adequate and impartial knowledge of one's own physical and mental fitness for the enterprise, since the work as projected may promise to tax one's physical powers severely and to require, for its successful conduct, large measure of industry, devotion, patience, and wisdom. Indeed any determinate purpose whatever inevitably implies a more or less varied and comprehensive inventory of conditions. Further illustration is not necessary for our present purpose. We may say that in a general

way the conditions relevant to a practical purpose will group themselves naturally under four heads of classification, as physical, sociological, physiological, and psychological. All four classes are objective, though the last two embrace conditions peculiar to the agent as an individual over against the environment to which for purposes of his present activity he stands in a sense opposed.

Now our present interest is not so much in the enumeration and classification of possible relevant conditions in a typical situation as in the significance of these relevant conditions in the agent's apprehension of them. Perhaps this significance cannot better be described than by saying that essentially and impressively the conditions are apprehended as, taken together, *warranting* the purpose that has been determined. We appeal, in support of this account of the matter, to an impartial introspection of the way in which the means and conditions of action stand related to the formed purpose in the moment of survey of a situation. The various details presented in the survey of a situation are apprehended, not as bare facts such as one might find set down in a scientist's notebook, but as warranting — as closely, uniquely, and vitally relevant to — the action that is about to be taken. This, as we believe, is a fair account of the situation in even the commoner and simpler emergencies that confront the ordinary man. Quite conspicuously is it true of cases in which the purpose is a purely technological one that has been worked out with considerable difficulty and is therefore not executed until after a somewhat careful survey of conditions has been taken. It is often true likewise in cases of express ethical judgment; if the ethical phases of the reflective process have not been excessively long and difficult, our definite sense of the ethical value of the act we are about to do lapses quite easily, and the factual aspects and features of the situation as given in one or more of the

four classes which we have distinguished take on an access of significance in their character of warranting, confirming, or even compelling the act determined upon. Of our ordinary sense-perception in the moments of its actual functioning no less than of conscience in its aspect of a moral perceptive faculty are the words of Bishop Butler sensibly true that "to preside and govern, from the very economy and constitution of man, belongs to it."[1] Even in cases of more serious moral difficulty this sanctioning aspect of the means and conditions of action is not overshadowed. If the situation is one in which by reason of their complexity these play a conspicuous rôle and must be surveyed, by way of preparation on the agents' part, for performance of the act, they inevitably assume, for the agent, their proper functional character. In general, the conditions presented in the system of factual judgments have a certain "rightful authority" which they seem to lend to the purpose or end with reference to which they were worked out to their present degree of factual detail. The conditions can thus seem to sanction the end because conditions and end have been worked out together. Gradual development on the one side prompts analytical inquiry upon the other and is in turn directed and advanced by the results of this inquiry. In the end the result may be read off either in terms of end or in terms of conditions and means.[2] The two readings must be in accord and the agent's apprehension of the conditions as warrant for the end is expression in consciousness of this "agreement."[3]

Now in this mode of apprehension of factual conditions there is a highly important logical implication—an implica-

[1] Sermon II.

[2] Not to imply of course that psychologically or logically the distinction of conditions and means is other than a convenient superficial one.

[3] Manifestly we have here been approaching from a new direction the "Recognition coefficient" of reality described above. See p. 266.

tion which inevitably comes more and more clearly into view with the continued exercise of judgment, even though the agent's habit of interest in the scrutiny of perplexing situations may still remain, by reason of the want of trained capacity for a broader view, limited in its range quite strictly to the physical sphere. This implication is, we shall declare at once, that of an endeavoring, striving, active principle or self which can be helped or hindered in its unfolding by particular purposes and sets of corresponding conditions—can lose or gain, through devotion to particular purposes, in the breadth, fulness, and energy of its life. The agent's apprehension of and reference to this active principle of course varies in all degrees of explicitness, according to circumstances, from the vague awareness that is present in a simple case of physical judgment to the clear recognition and endeavor at definition that are characteristic of serious ethical crises.

That the situation should develop and bring to light this factor is what should be expected on general grounds of logic—for to say that a set of conditions warrants or sanctions or confirms a given purpose implies that our purposes can stand in need of warrant, and this would seem to be impossible apart from reference to a process whose maintenance and development in and through our purposes are assumed as being as a matter of course desirable. It is of the essence of our contention that the apprehension of the conditions of action as *warranting the end* is a primordial and necessary feature of the situation—indeed, its constitutive feature. If our concern were with the psychological development of self-consciousness as a phase of reflective experience, we should endeavor to show that this development is mediated in the first instance by the "subjective" phenomena of feeling, emotion, and desire which find their place *in the course* of the judgment-process. We should then hold that, with the *conclusion* of the judg-

ment-process and the accompanying sense of the known conditions as reassuring and confirmatory of the end, comes the earliest possibility of a discriminative recognition of the self as having been all along a necessary factor in the process. We should hold that outside of the *process* of reflective attention there can be no psychical or "elementary" *beginnings* of self-consciousness, and then that, except as a development out of the experience to which we have referred as marking the *conclusion* of the attentive process, there can be no recognized specific and in any degree definable consciousness of self. All this, however, lies rather beside our present purpose. We wish simply to insist that it is out of the apprehension of conditions as reassuring and confirmatory, out of this "primordial germ," that the agent's definite recognition of himself as a center of development and expenditure of energy takes its rise. Here are the beginnings of the possibility of self-conscious ethical and economic valuation.

This apprehension of the means as *warranting* is, we have held, a fact even when the means surveyed are wholly of the physical sort, and we have thereby implied that consciousness of the self as "energetic" may take its rise in situations of this type or during the physical stage in the development of a more complex total situation. It would be an interesting speculation to consider to what extent and in what way the development of the sciences of sociology and physiology may have been essentially facilitated by the emergence of this form of self-consciousness. But however the case may stand with these sciences or with the rise of real interest in them in the mind of a given individual, interest in the objective psychological conditions of a contemplated act is certainly very closely dependent upon interest in that subjective self which one has learned to know through the past exercise of judgment in definition and contemplation of conditions of

the three other kinds. The more diversified and complex the array of physical and social conditions with reference to which one is to act, the more important becomes not simply a clearly articulated knowledge of these, but also a knowledge of oneself. The self that is warranted in its purpose by the surveyed conditions must hold itself in a steady and consistent attitude during the performance on pain of "falling short of its opportunity" and thereby rendering nugatory the reflective process in which the purpose was worked out. Experience abundantly shows how easily the assurance that comes with the survey of conditions may come to grief, though there may have been on the side of the conditions, so far as defined, no visible change; and in so far as self-consciousness has already emerged as a distinguishable factor in such situations, failures of the sort we here refer to are the more easily identified and interpreted. Some sudden impulse may have broken in upon the execution of the chosen purpose; there may have been an unexpected shift of interest away from that general phase of life which the purpose represented; or in any one of a number of other ways may have come about a wavering and a slackening in the resolution which marked the commencement of action. The "energetic" self forthwith (if we may so express it) recognizes that the sanction which the conditions so far as then known gave to its purpose was a misleading because an incomplete one, and it proceeds to develop within itself a new range of objective fact in which may be worked out the explanation, and thereby a method of control, of these new disturbing phenomena. The qualities of patience under disappointment, courage in encountering resistance, steadiness and self-control in sustained and difficult effort—these qualities and others of like nature come to be discriminated from each other by introspective analysis and may be as accurately measured, and in general as objectively studied, as any of the conditions to a

saving knowledge and respect of which one may already have attained, and these newly determined psychological conditions will henceforth play the same part in affording sanction to one's purposes as do the rest. An ordered system of psychological categories or points of view comes to be developed, and an accurate statement of conditions of personal disposition and capacity relevant to each emergency as it arises will hereafter be worked out—over against and in tension with one's gradually forming purposes in like manner as are statements of all the other relevant objective aspects of the situation.[1]

In the "energetic" self, we shall now seek to show, we have the common and essential principle of both ethical and economic valuation which marks these off from other and subordinate types of judgment. Let us determine as definitely as possible the nature and function of this principle.

The recognition of the chosen purpose as one favorable or otherwise to the self, and so the recognition of the self as capable of furtherance or retardation by its chosen purposes, is not always a feature of the state of mind which may ensue upon completed judgment. In the commoner situations of the everyday life of normal persons, as practically always in the lives of persons of relatively undeveloped reflective powers, it is quite wanting as a separate distinguished phase of the experience. In such cases it is present, if present at all, merely as the vaguely felt implicit meaning of the recognition that the known conditions sanction and confirm the

[1] This, if it were intended as an account of the genesis of psychology as a science and of the psychological interest on the part of the individual, would doubtless be most inadequate. We have, for one thing, made no mention of the part which error and resulting practical failure play in stimulating an interest in the *judgmental* processes of observation and the like, and in technique of the control of these. Here, as well as in the processes of *execution* of our purposes, must be found many of the roots of psychology as a science. Moreover, no explanation has been offered above for the appropriation by the "energetic" self of these phenomena of interruption and retardation of its energy as being, in fact, its own, or within itself. The problem would appear to be psychological, and so without our province, and we gladly pass it by.

purpose. Such situations yield easily to attack and threaten none of those dangers, none of those possible occasions for regret or remorse, of which complex situations make the person of developed reflective capacity and long experience so keenly apprehensive. They are disposed of with comparatively little of conscious reconstruction on either the subject or the predicate side, and when a conclusion has been reached the agent's recognition of the conditions carries with it the comfortable though too often delusive assurance of the complete and perfect eligibility of the purpose. If the question of eligibility is raised at all, the answer is given on the tacit principle that "whatever purpose is, is right." To the "plain man," and to all of us on certain sides of our lives, every purpose for which the requisite means and factual conditions are found to be at hand is, just as our purpose, therefore right.

The same experience of failure and disappointment which proves our purpose to have been, from the standpoint of enlargement and enrichment of the self, a mistaken one brings a clearer consciousness of the logic implicit in our first confident belief in the purpose, and at the same time emphasizes the need of making this logic explicit. The purpose, as warranted to us by the conditions and assembled means that lay before us, was our own, and *as our own* was implicitly a purpose of furtherance of the self. The disappointment that has come brings this implication more clearly into view, and likewise the need of methodical procedure, not as before in the determination of *conditions*, but in the determination of purposes as such; for the essence of the situation is that the *execution* of the purpose has brought to light some unforeseen consequence now recognized as having been all the while in the nature of things involved in the purpose. This consequence or group of consequences consists (in general terms) in the abatement or arrest of desirable modes of activity which find their motivation elsewhere

in the agent's system of accepted ends, and it is registered in consciousness in that sense of restriction or repression from without which is a notable phase of all emotional experience, particularly in its early stages. The consequences are as undesirable as they are unexpected, and the reaction against them, at first emotional, presently passes over into the form of a reflective interpretation of the situation to the effect that the self has suffered a loss by reason of its thoughtless haste in identifying itself with so unsafe a purpose.[1]

It is the essential logical function of the consciousness of self to stimulate the valuation processes which take their rise in the stage of reflective thought thus attained. The consciousness of self is a peculiarly baffling theme for discussion from whatever point of view, because one finds its meaning shifting constantly between the two extremes of a subjectivity to which "all objects of all thought" are external and an objective thing or system of energies which is known just as other things are—known in a sense by itself, to be sure, but *known* nevertheless, and thought of as an object standing in possible relations to other objects. Now, it is of the subjective self that we are speaking when we say that its essential function is the stimulation or incitement of the valuation processes, but manifestly in order to serve thus it must nevertheless be presented in some sort of sensuous imagery. The subjective self may, in fact, be thought of in many ways—presented in many different sorts of imagery—but in all its forms it must be distinguished carefully from

[1] We can, of course, undertake no minute analysis of the psychological mechanism or concatenation of the process here sketched in barest outline. Our present purpose is wholly that of description. Slight as our account of the process of transition is, we give it space only because it seems necessary to do so in order to make intelligible the accounts yet to be given of the conscious valuation processes for which the movement here described prepares the way.

It will be observed that we assume above that the purpose is *successful as planned* and *by succeeding* brings about the undesirable results. Failure in execution of the purpose as such could only, in the manner already outlined, prompt a more adequate investigation of the *factual conditions*.

that objective self which, as described in psychology, is the assemblage of conditions under which the subjective or "energetic" self works out its purposes. It may be the pale, attenuated double of the body, or a personal being standing in need of deliverance from sin, or an atom of soul-substance, or, in our present terminology, a center of developing and unfolding energy. The significant fact is that, however different in content and in motive these various presentations of the subjective self may be, they are, one and all, as presentations and as in so far objective, stimuli to some definite response. The savage warrior deposits his double in a tree or stone for safety while he goes into battle; the self that is to be saved from sin is a self that prompts certain acceptable acts in satisfaction of the quasi-legal obligations that the fact of sin has laid upon the agent. The presented self, whatever the form it may assume as presentation, has its function, and this function is in general that of stimulus to the conservation and increase, in some sense, of the self that is not presented, but for whom the presentation is. Now our own present description of the self as "energetic," as a center or source of developing and unfolding energy is in its way a presentation. It consists of sensuous imagery and suggests a mechanical process, or the growth of a plant perhaps, which if properly safeguarded will go on satisfactorily—a process which one must not allow to be perturbed or hindered by external resistance or internal friction or to run down. To many persons doubtless such an account would seem arbitrary and fantastic in the extreme, but no great importance need be attached to its details. The kind and number and sensuous vividness of the details in which this essential content of presentation may be clothed must of course depend, for each person, upon his psychical idiosyncrasy.

Indeed, as the habit of reflection upon purposes comes

to be more firmly fixed, and the procedure of valuation to be consciously methodical and orderly, the sensuous content of the presented self must grow constantly more and more attenuated until it has declined into a mere unexpressed principle or maxim or tacit presumption, prescribing the free and impartial application of the method of valuation to particular practical emergencies as these arise. For a self, consisting of presented content of whatever sort, which one seeks to further through attentive deliberation upon concrete purposes, must, just in so far as it has *content*, determine the outcome of ethical judgment in definite ways. Thus the soul that must be saved from sin (if this be the content of the presented self) is one that has transgressed the law in certain ways and the right relations that should subsist between creature and Creator, and has thereby incurred a more or less technically definable guilt. This guilt can only be removed and the self rehabilitated in its normal relations to the law by an appropriate response to the situation — by a choice on the agent's part, first, of a certain technical procedure of repentance, and then of a settled purpose of living as the law prescribes.[1] So also our own image of the self as "energetic" after the manner of a growing organism may well seem, if taken too seriously as to its presentational details, to foster a bias in favor of over-conservative adherence to the established and the accredited as such.[2]

The argument of the last few paragraphs may be restated

[1] The case is not essentially altered in logical character if for the Levitical law be substituted the general principles of the new dispensation read off into details by an authoritative church or by "private judgment."

[2] A remark may be added here by way of caution. The presented self, we have said, attenuates to a mere maxim or tacit presumption in favor of a certain type of logical procedure in dealing with the situation. It must be remembered that the presented self, like all other presentation, is and comes to be for the sake of its function in experience, and so is practical from the start. The process sketched above is therefore not from bare presented content as such to a methodological presumption, which, as methodological and not contentual, is qualitatively different from what preceded it.

in the following way in terms of the evolution of the individual's moral attitude or technique of self-control:

1. In the stage of moral evolution in which custom and authority are the controlling principles of conduct, moral judgment in the proper sense of self-conscious, critical, and reconstructive valuation of purposes is wanting. Such judgment as finds here a place is at best of the merely casuistical type, looking to a determination of particular cases as falling within the scope of fixed and definite concepts. There is no self-consciousness except such as may be mediated by the sentiment of willing obedience. It is, at this stage, not the *particular sort* of conduct which the law prescribes that in the agent's apprehension enlarges and develops the self; so far as any thought of enlargement and development of the self plays a part in influencing conduct, these effects are such as, in the agent's trusting faith, will come from an entire and willing acceptance of the law as such. "If any man will do His will, he shall know of the doctrine." Moreover, the stage of custom and authority goes along with, in social evolution, either very simple social conditions or else conditions which, though very complex, are stable, so that in either case the conditions of conduct are in general in harmony with the conduct which custom and authority prescribe. The law, therefore, can be absolute and takes no account of possible inability to obey. The divine justice punishes infraction of the law simply as objective infraction; not as sin, in proportion to the sinner's responsibility.

2. But inevitably custom and authority come to be inadequate. As social conditions change, custom becomes antiquated and authority blunders, wavers, contradicts itself in the endeavor to prescribe suitable modes of individual conduct. Obedience no longer is the way to light. The self becomes self-conscious through feeling more and more the repression and the misdirection of its energies that obedi-

ence now involves. This is the stage of subjective morality or conscience; and the rise of conscience, the attitude of appeal to conscience, means the beginning of endeavor at *methodical solution* of those new problematic situations in the attempt to deal with which authority as such has palpably collapsed. We say, however, that conscience is the *beginning* of this endeavor; for conscience is, in fact, an ambiguous and essentially transitional phenomenon. On the one hand conscience is the inner nature of a man speaking within him, and so the self furthers its own growth in listening to this expression of itself. In this aspect conscience is methodological. But on the other hand conscience *speaks*, and, speaking, must say something determinate, however general this something may be. In this aspect conscience is a *résumé* of the *generic* values realized under the system of custom and authority, but to the present continued attainment of which the *particular prescriptions* of custom and authority are no longer adequate guides. Conscience is thus at once an inward prompting to the application of logical method to the case in hand and a body of general or specific rules under some one of which the case can be subsumed. In ethical theory we accordingly find no unanimity as to the nature of conscience. At the one extreme it is the voice of God speaking in us or through us, in detailed and specific terms — and so, virtually, custom and authority in disguise. At the other it is an empty abstract intuition that the right is binding upon us — and, so, simply the hypostasis of demand for a logical procedure. The history of ethics presents us with all possible intermediate conceptions in which these extreme motives are more or less skilfully interwoven or combined in varying proportions. The truth is that conscience is essentially a transitional conception, and so necessarily looks before and after. In one of its aspects it is a self which has come to miss (and therefore to image

for itself) the values and, it may be, a certain dawning sense of vitality and growth which obedience to authority once afforded.[1] In its other aspect it is a self that is looking forward in a self-reliant way to the determination on its own account of its purposes and values. And finally, as for the environing world of means and conditions, clearly this is not necessarily harmonious with and amenable to conscience; indeed, in the nature of things it can be only partially so. The morality of conscience is, therefore, either mystical, a morality that seeks to escape the world in the very moment of its affirmation that the world is unreal (because worthless), or else it takes refuge in a virtual distinction between "absolute" and "relative" morality (to borrow a terminology from a system in which properly it should have no place), perhaps setting up as an intermediary between heaven and earth a machinery of special dispensation.[2]

3. Conscience professes in general, that is, to be autonomous, and the profession is, strictly speaking, a contradiction in terms. Moreover, apart from considerations of the logic of the situation, theories of conscience have, as a matter of fact, always lent themselves kindly to theological purposes just as the theory of self-realization in its classic modern statement rests upon a metaphysical doctrine of the Absolute.[3] Inevitably the movement concealed within this essentially unstable conception must have its legitimate outcome (1) in a clearing of the presented self of its fixed elements of content, thus setting it free in its character of a non-presentational principle of valuation, and (2) a setting apart of these elements of content from the principle of valuation

[1] *Recognized* authority is, of course, not the same thing by any means as authority unrecognized because absolutely dominant.

[2] We may be pardoned for supplying from the history of ethics no illustrations of this slight sketch.

[3] In fact, as suggested above, the *Prolegomena to Ethics* is in many respects essentially intuitional in spirit, though its intuitionism is of a modern discreetly attenuated sort.

as standards for reference and consultation rather than as law to be obeyed.

We have thus correlated our account of the logic whereby the "energetic" self comes to explicit recognition as stimulus to the valuation-process with the three main stages in the moral evolution of the individual and the race. We were brought to this first-mentioned part of our discussion by our endeavor to find out the factors involved in the first acceptance of a conscious purpose (or, indifferently, the subsequent recognition of it as a standard) — an endeavor prompted by the need of distinguishing, with a view to their special analysis, the two types of valuation-process. We now return to this problem.

The following illustration will serve our present undertaking: A lawyer or man of business is struck by the great need of honest men in public office, or has had his attention in some impressive way called to the fact of great inequality in the present distribution of wealth, and to the diverse evils resulting therefrom. These facts hold his attention, perhaps against his will, and at last suggest the thought of his making some personal endeavor toward improvement of conditions, political or social, as the case may be. On the other hand, however, the man has before him the promise of a successful or even brilliant career in his chosen occupation, and is already in the enjoyment of a substantial income, which is rapidly increasing. Moreover, he has a family growing up about him, and he is not simply strongly interested in the early training and development of his children, and desirous of having himself some share in conducting it, but he sees that the suitable higher education of his children will in a few years make heavy demands upon his pecuniary means. Here, then, we have a situation the analysis of which will enable us to distinguish and define the provinces of ethical and economic judgment.

It is easy to see that we have here a conflict between ends. On the one side is the thought of public service in some important office or, let us say, the thought of bettering society in a more fundamental way by joining the propaganda of some proposed social reform. This end rests upon certain social impulses in the man's nature and appeals to him as strongly, we may fairly assume, as would any purpose of immediate self-interest or self-indulgence, so that it stands before him and urges him with an insistent pertinacity that at first even puts him on his guard against it as a temptation. Over against this concrete end or subject of moral valuation stand other ends comprehended or symbolized in the ideals of regular and steady industry, of material provision for family, of paternal duty toward children, of scholarly achievement as lawyer or judge, and the like—ideals which are indeed practical and personal, but which, as they now function, are general or universal in character, are lacking in the concreteness and emotional quality which belong to the new purpose which has just come to imagination and has brought these ideals into action on the predicate side. Will this life of social agitation really be quite "respectable," and befitting the character of a sober and industrious man? Will it enable me to support and educate my family? Will it permit me to devote sufficient attention to their present care and training? And will it not so warp my nature, so narrow and concentrate my interests, as in a measure to disqualify me for the right exercise of paternal authority over them in years to come? Moreover, will not a life of agitation, of constant intercourse with minds and natures in many ways inferior to my own and those of my present professional associates, lower my intellectual and moral standards, and so make of me in the end a less useful member of society than I am at present? These and other questions like them present the issue in its earlier aspect.

Presently, however, the tentative purpose puts in its defense, appealing to yet other recognized ideals or standards of self-sacrifice, benevolence, or social justice as witnesses in its favor. The conflict thus takes on the subject-predicate form, as has already been explained. On the one hand we have the undefined but strongly insistent concrete purpose; on the other hand we have a number of symbolic concepts or universals standing for accepted and accredited habitual modes of conduct. The problem is that of working the two sides of the situation together into a unified and harmonious plan of conduct which shall be at once concrete and particular, as a plan chosen by way of solution of a given present emergency, and universal, as having due regard for past modes of conduct, and as itself worthy of consideration in coping with future emergencies.

Now, how shall we discriminate the ethical and the economic aspects of the situation which we have described? We shall most satisfactorily do this through a consideration of the various sorts of conditions and means of which account must be taken in working the situation through to a solution, or (to express it more accurately) the various sorts of conditions and means which need to be defined over against the purpose as the purpose gradually develops into detailed form.

We may say, first of all, that there are *psychological* conditions which must be taken into consideration in the case before us. Our thesis is that in so far as a situation gives rise to the determination of psychological conditions and is advanced along the way toward final solution through determination of these, the situation is an ethical one. In other words, we hold that the ends at issue in the situation are "related" in so far as they depend upon the same set of psychological conditions. In so far as these statements are not true of the situation there must be a resort to economic judgment.

By the general questions suggested above as presenting

themselves to the agent we have indicated in what way the course of action taken must have regard to certain psychological considerations. Entering upon the new way of life will inevitably lessen the agent's interest in his present professional pursuits and so make difficult, and in the end even irksome, any attempt at continuing in them either as a partial means of livelihood or as a recreation. The new work will be absorbing—as indeed it must be if it is to be worth while. In the same way the man must recognize that his nature is not one of the rare ones so richly endowed in capacity for sympathy that constant familiarity with general conditions of misery and suffering does not dull their fineness of sensibility to the special concerns and interests of particular individuals. If he takes his suffering fellow-men at large for his children, his own children will probably suffer just in so far the loss of a father's special sympathy and understanding care. And likewise he must be drawn away and isolated from his friends, for it will be hard for him, he must foresee, to hold free and intimate converse with men whose ways of thinking lie apart from his own controlling interest and for whose insensibility to the things that move him so profoundly he must come more and more to feel a certain impatience if not contempt. Not to enlarge upon these possibilities and others of like nature, we must see that reflection upon the situation must presently bring to consciousness these various consequences of the kind of action which is proposed and a recognition that the ground of relation between them and the action proposed lies in certain qualities and limitations of his own nature. These latter are for him the general psychological conditions of action, his "empirical self," the general nature of which he has doubtless already come to be familiar with in many former situations perhaps wholly different in superficial aspect from from the present one.

Now, just in so far as there is this relation of mutual exclusiveness between the end proposed and certain of the standard ends or modes of conduct which are involved, judgment will be by the direct or ethical method of adjustment presently to be described. Let us assume accordingly that a tentative solution of the problem has been reached to the effect that a portion of the lawyer's time shall be given to his profession and to his family life, and that the remainder shall be given to a moderate participation in the social propaganda. Over against this tentative ethical solution, as its warrant in the sense explained above, will stand in the survey of the situation that may now be taken a certain fairly definite disposition or *Anlage* of the capacities and functions of the empirical self.[1] Now on the basis of the ethical solution thus reached there will be further study of the situation, perhaps as a result of failure in the attempt to carry the solution into practice, but more probably as a further preparation for overt action. Forthwith it develops that the compromise proposed will be impossible. Participation in the social agitation will excite hostility on the part of the classes from which possible clients would come and will cause distrust and a suspicion of inattention to details of business among the lawyer's present clientage. There are, in a word, a whole assemblage of "external" sociological conditions (and we need not stop to speak of physical conditions which co-operate with these and contribute to their effect) which effectually veto the plan proposed. In general these external conditions are such as to deprive the agent of the means of living in the manner which the ethical determination of the end proposes. In the present case, unless some other more feasible compromise can be devised, either the one extreme or the other must be chosen — either continuance in the profession and the corresponding general

[1] This would appear to be the logical value of functional psychology as a science of mental process.

scheme of life or the social propaganda and reliance upon such scant and precarious income as it may incidentally afford.

We can now define the economic aspect of a situation in terms of our present illustration. The end which the lawyer had in view in a vague and tentative way was, as we saw, defined with reference to his ethical standards—that is to say, a certain measure of participation in the new work was determined as satisfactory at once to his ideals of devotion to the cause of social justice and to his sense of obligation to himself and to his family. In this sense, logically speaking, a subject was defined to which a system of predicates, comprehended perhaps under the general predicate of right or good, applies. Now, however, it appears, from the inspection of the material and social environment, that the execution of this purpose, perfectly in accord though it may be with the spiritual capacities and powers of the agent, is possible only on pain of certain other consequences, certain other sacrifices, which have not hitherto been considered. That a half-hearted interest in his profession would still not prevent his earning a moderate income from it was never questioned in the ethical "first approximation" to a final decision, but now the issue is fairly presented, and, as we must see, in a very difficult and distressing way; for the essence of the situation is that the ends now in conflict, that of earning a living and caring for his family and that of laboring for the social good, are not intrinsically (that is, from the standpoint of the empirical self) incompatible. On the contrary, these two ends are psychologically quite compatible, as the outcome of the ethical judgment shows; only the "external" conditions oppose them to each other. The difficulty of the case lies, then, just in the fact that the conflicting ends, both standing, as they do, for strong personal interests of the self, nevertheless cannot be brought to an adjustment by the

direct method of an appportionment between them of the "spiritual resources" or "energies" of the self. Instead, the case is one calling for an apportionment of the external means, and so, proximately, not for immediate determination of the final end, but for economic determination of the means.

We come now to the task of describing, so far as this may be possible, the judgment or valuation-processes which correspond to the types of situation thus distinguished. We are able now to see that these must be constructive processes, in the sense that in and through them courses of conduct adapted to unique situations are shaped by the concourse of established standards with a new end which has arisen and put in its claim for recognition. We can see, moreover, that these valuation-processes effect a construction of a different order from that given in factual judgment. Factual judgment determines external objects as means or conditions of action from standpoints suggested by the analysis and development of ends. Judgments of valuation determine concrete purposes from standpoints given in recognized general purposes of the self—purposes which are general in virtue of their having been taken by abstraction from concrete cases, in which they have received particular formulation as purposes, and set apart as typical modes of conduct in general serviceable to the "energetic" self.[1] Logically factual judgment is at all times subordinate to valuational; when valuational judgment has become consciously deliberate, this logical subordination becomes explicit and factual judgment appears in its true character. Its essential function is that of presenting the conditions which sanction and stimulate our ethically and economically determined purposes.[2] Finally, in the construction of purposes and recon-

[1] We have already given a slight sketch of the historical process here characterized in the barest logical terms.

[2] Further consideration of the problem of factual judgment must be deferred to Part V.

struction of standards in valuation the ideal of the expansion and development of the "energetic" self controls — not as a "presented" or contentual self prescribing particular modes of conduct, but as a principle prescribing the greatest possible openness to suggestion and an impartial application of the method of valuation to the case in hand. As we have said, in whatever sensuous image we figure the "energetic" self, its essential character lies in its function of stimulating methodical valuation. In place of the two-faced and ambiguous "presented" self, which is characteristic of the stage of conscience, we now have in the stage of valuation the "energetic" self on the one hand and standards on the other.[1]

We have now to consider the actual procedure of valuation, and first the ethical form as above defined. Bearing in mind that we are not concerned with cases of obedience to authority or deference to conscience, let us take a case of genuine moral conflict such as we were considering some time since. Suppose that one has the impulse to indulge in some form of amusement which he has been in the habit of considering frivolous or absolutely wrong. The end, as soon as imaged, or rather as the condition of its being imaged, encounters past habits of conduct symbolized by standards — standards which may be presented under a variety of forms, a maxim learned in early childhood, the ideal of a Stoic sage or Christian saint, the example of some friend, or a precept put in abstract terms, but which, however presented, are essentially symbolic of established habits of thought or action.[2] Solution of such a problem proceeds, in general, along two closely interwoven lines: (1) collation and comparison of cases recognized as conforming to the standard,

[1] The relation of the empirical self to the "energetic" and to standards will come in for statement in Part V in the connection just referred to.

[2] It might be possible to construct a "logic" of these various types of working moral standard in such a way as to show that in each type there is implied the one next higher morphologically, and ultimately the highest — that is, some sort of concept of the "energetic" self.

with a view to determining the standard type of conduct in a less ambiguous way, and (2) definition of the relations between this type of conduct and other recognized types in the catalogue of virtues.

Now, these two movements are in fact inseparable, for, without reference to the entire system of virtues of which the one now asserting itself is a member, the comparison of cases with a view to definition of the virtue would be blind and hopeless of any outcome. The agent in the case before us desires to be temperate in amusement and to make profitable use of leisure time, but after all he may wonder whether these ideals really require the austerities of certain mediæval saints or the Stoic *ataraxy*. The saint's feats of spiritual athletics may have served a useful purpose, in ruder times, as evidence of human power to lead a virtuous and thoughtful life, but can such self-denial now be required of the moral man? It is apparent, in short, that the superficially conceived ideal must be analyzed. We must consider the "spirit" of our saint or hero, not the letter of his conduct, as we say, and in interpreting it make due allowance for the conditions of the time in which he lived and the grade of general intelligence of those he sought to edify. Whether our standard is a person or a parable or an abstractly formulated precept, the logic of the situation is the same in every case of judgment. The analysis of a standard cannot proceed without the "synthesis" or co-ordination of the type of conduct thereby defined with other distinguishable recognized types of conduct into a comprehensive ideal of life as a whole. In the last resort the implicit relations of all the virtues will be made explicit in the process of defining accurately any one of them.

In the last resort, then, the predicate of the ethical judgment is the whole system of the recognized habits of the agent, and each judgment-process is in its outcome a read-

justment of the system to accommodate the new habit that has been seeking admission. Both the old habits and the new impulse have been modified in the process just as the intension of a class term and the particular "subsumed" under the class are reciprocally modified in the ordinary judgment of sense-perception. We are once more able to see that the process of ethical judgment or valuation is not a process of subsumption or classification, of *ascertaining* the value of particular modes of conduct, but on the contrary a process of determining or *assigning* value. Each judgment process means a new and more or less thoroughgoing redetermination of the self and hence a fixation of the ethical value of the conduct whose emergence as a purpose gave rise to the process. The moral experience is not essentially and in its typical emergencies a *recognition* of values with a view to shaping one's course accordingly, but rather a determining or a *fixation* of values which shall serve for the time being, but be subject at all times to re-appraisal.

If the present discussion were primarily intended as a contribution to general ethical theory,it would be a part of our purpose to show in detail that any formulation of an ethical ideal in contentual "material" terms must always be inadequate for practical purposes and hence theoretically indefensible. This, as we believe, could be shown true of the popularly current ideal of self-realization as well as of hedonism in its various forms and the older systems of conscience or the moral sense. These all are essentially fixed ideals admitting of more or less complete specification in point of content and regarded as tests or canons by appeal to which the moral quality of any concrete act can be deductively ascertained. They are the ethical analogues of such metaphysical principles as the Cartesian God or the Substance of Spinoza, and the logic implied in regarding them as adequate standards for the valuation of conduct is the

logic whereby the Rationalist sought to deduce from concepts the world of particular things. The present desideratum in ethical theory would appear to be, not further attempts at definition of a moral ideal of any sort, but the development of a logical method for the valuation of ideals and ends in which the results of more modern researches in the theory of knowledge should be made use of—in which the concept of self should play the part, not of the concept of Substance in a rationalistic metaphysics,[1] but of such a principle as that of the conservation of energy, for example, in scientific inference.[2]

We have, then, in each readjustment of the activities of the self a reconstruction in knowledge of ethical reality—a reconstruction which at the same time involves the assignment of a definite value to the new mode of conduct which has been worked out in the readjustment. We conclude, then, that the ethical experience is one of continuous construction and reconstruction of an order of objective reality, within which the world of sense-perception is comprised as the world of more or less refractory means to the attainment of ethical purposes. In this process of construction of ethical reality current moral standards play the same part as concepts already defined—that is to say, the agent's present habits—

[1] It matters not at all whether, in ethics or metaphysics, our universal be abstract or on the other hand "concrete," like Green's conception of the self, or a "Hegelian" Absolute. Its logical use in the determination of particulars must be essentially the same in either case.

[2] In this connection reference may be made to MR. TAYLOR'S recent work, *The Problem of Conduct*. Mr. Taylor reduces the moral life to terms of an ultimate conflict between the ideals of egoism and social justice, holding that the conflict is in theory irreconcilable. With this negative attitude toward current standards in ethical theory one may well be in accord without accepting Mr. Taylor's further contention that a theory of ethics is therefore impossible. Because the "ethics of subsumption" is demonstrably futile it by no means follows that a method of ethics cannot be developed along the lines of modern scientific logic which shall be as valid as the procedure of the investigator in the sciences. Mr. Taylor's *logic* is virtually the same as that of the ethical theories which he criticises; because an ethical *ideal* is impossible, a theory of ethics is impossible also. One is reminded of MR. BRADLEY'S criticism of knowledge in the closing chapters of the *Logic* as an interesting parallel.

do in the typical judgment of sense-perception. They play the part of symbols suggestive of recognized and heretofore habitual modes of action with reference to conduct of the type of the particular instance that is under consideration, serving thus to bring to bear upon the subject of the judgment sooner or later the entire moral self. The outcome is a new self, and so for the future a new standard, in which the past self as represented by the former standard and the new impulse have been brought to mutual adjustment. Our position is that this adjustment is essentially experimental and that in it the *general principle* of the unity and expansion of the self must be presupposed, as in inductive inference general principles of teleology, of the conservation of energy, and of organic interconnection of parts in living things are presupposed. The unity and increase of the self is not a test or canon, but a principle of moral experimentation.[1]

Finally, we must note one further parallel between ethical judgment and the judgment of sense-perception and science. However the man of science may, as a nominalist, regard the laws of nature as mere observed uniformities of fact and particulars as the true realities, these same laws will nevertheless on occasion have a distinctly objective character in his actual apprehension of them. The stubbornness with which a certain material may refuse to lend itself to a desired purpose will commonly be reinforced, as a matter of apprehension, by one's recognition of the "scientific necessity" of the phenomenon. As offering resistance the thing itself, as we have seen, becomes objective; so also does the law of which this case may be recognized as only a particular example—and the other type of objectivity experience we need not here do more than mention as likewise possible

[1] MR. BOSANQUET'S discussion of the place of the principle of teleology in analogical inference will be found suggestive in this connection (*Logic*, Vol. II, chap. iii).

in one's apprehension of the law as well as of the "facts" of nature. Both types of objectivity attach to the moral law as well. The standard that restrains is one "above" us or "beyond" us. Even Kant, as the similitude of the starry heavens would suggest, was not incapable of a faint "emotion of the heteronomous," and authority in one form or another is a moral force whose objective validity as moral, both in its inhibiting and in its sanctioning aspects, human nature is prone to acknowledge. The apprehension of objectivity is everywhere, as we have held, emotional. One type of situation in which the moral law takes on this character is found in the interposition of the law to check a forward tendency; the other is found in the instant of transition from doubt to the new adjustment that has been reached. In the one case the law is "inexorable" in its demands. In the other case there are two possibilities: If the adjustment has been essentially a rejection of the new "temptation," the law which one obeys is one no longer inexorable, but sustaining, as a rock of salvation. If the adjustment is a distinctly new attitude, the sense of the objectivity of the principle embodied in it will commonly be less strong, if not for the time being almost wholly wanting; but in the moment of overt action it will in some degree wear the character of a firm truth upon which one has taken his stand.

This general view of the logical constitution of the moral experience may suggest a comparison with the fundamental doctrine of the British Intellectualist school. The Intellectualist writers were very largely guided in their expositions by the desire of refuting on the one hand Hobbes and on the other Shaftesbury and Hutcheson. Against Hobbes they wished to establish the obligatory character of the moral law entirely apart from sanction or enactment by political authority. Against the Sentimentalists they wished to vindicate its objectivity and permanence. This twofold

purpose they accomplished by holding that the morality of conduct lies in its conformity to the "objective nature of things," the knowledge of which, in its moral aspects, is logically deducible from certain moral axioms, self-evident like those of mathematics. Now this mathematical analogy is the key to the whole position of the Intellectualist writers. By so conceiving the nature of knowledge these men seriously weakened their strong general position. Mathematics is just that species of knowledge which is most remote from and apparently independent of any reference to conduct, and the Intellectualists, by choosing it as their ideal, were thereby rendered incapable of explaining the obligatoriness of the moral law. An adequate psychology of knowledge would have obviated this difficulty in their system.

The occasion for economic judgment is given, as we have seen, in a conflict between ends not incompatible, in view of any ascertainable conditions of the agent's nature as an empirical self, but inhibitory of each other in view of what we have described as conditions external to the agent. Thus the lawyer in our illustration found his plan of compromise thwarted by the existence of such sociological conditions as would make the practice of his profession, in the manner intended, impossible, and so cut off his income. Similarly the peasant in a European country finds that (for reasons which, more probably, he does not understand) he can no longer earn a living in the accustomed way, and emigrates to a country in which his capital and his physical energies may be more profitably employed. So also in the everyday lives of all of us ends and interests quite disparate, so far as any relation to each other through our psychical capacities is concerned, stand very frequently in opposition, nevertheless, and calling for adjustment. We must make a choice between amusement or intellectual pursuits or the means of

æsthetic culture, on the one hand, and the common necessaries of life on the other, and the difficulty of the situation lies just in absence of any sort of "spiritual affinity" between these ends. There is no necessary ratio between the satisfaction of the common needs of life and the cultivation of the higher faculties—no ratio for which the individual can ever find a sanction in the constitution of his empirical self through the direct method of ethical valuation. The common needs must have their measure of recognition, but no attempted ethical valuation of them can ever come to a result convincingly warranted to the "energetic" self by psychological conditions. The economic situation as such is in this sense (that is, from the standpoint of any recognized ethical standards) unintelligible. It is this ethical unintelligibility that often lends a genuine element of tragedy to situations which press urgently and in which the ends at issue are of great ethical moment. It is no small matter to the emigrant, for example, that he must cut the very roots by which he has grown to the sort of man he finds himself to be. His whole nature protests against this violence, and questions its necessity, though the necessity is unmistakable and it would be quite impossible for him not to act accordingly. Nevertheless, tragic as such a conflict may well be, it does not differ in any logically essential way, does not differ in its degree of strictly logical difficulty, from the ethically much less serious economic problems of our everyday life.

Now, we have already defined the economic act for which economic judgment is preparatory as being, in general terms, the diversion of certain means from a present use to which they have been devoted to a new use which has come to seem in a general way desirable.[1] Thus, in the cases just mentioned, the lawyer contemplates the virtual purchase of his

[1] See above, p. 243 and p. 259 *ad fin.*

new career by the income which his profession might in years to come afford him, the emigrant seeks a better market for his labor, and the pleasure-seeker and the ambitious student and the buyer of a commodity in the market propose to themselves, each one, the diversion from some hitherto intended use of a sum of money. Manifestly it is immaterial from our logical point of view whether the means in question which one proposes to apply in some new way are in the nature of physical and mental strength, or materials and implements of manufacture ready to be used, or means of purchase of some sort wherewith the desired service or commodity may be obtained at once. The economic problem, to state it technically, is the problem of the *reapplicability of the means*, interpreting the category of means quite broadly.

In a word, then, the method of procedure adapted to the economic type of situation is that of valuation of the means, not that of direct valuation of the ends. This method is one of valuation since, like the ethical method, it is determinative of a purpose, but it accomplishes this result in its own distinctive way. The problem of our present analysis will accordingly be how this method of valuation of the means is able to help toward an adjustment of disparate or unrelated ends which the ethical method is inadequate to effect.

Let us assume that a vague purpose of foreign travel, for example, has presented itself in imagination, and that the preliminary stage of ethical judgment has been passed through, with the result that the purpose, in a more definite form than it could have at first, is now ready for economic consideration. In the first place the cost of the journey must be determined, and this step, in terms of our present point of view, is simply a methodological device whereby certain ends which the standards involved in the stage of ethical judgment could not suggest or could not effectually take into co-operation with themselves in their determination

of the end are brought into play. Ascertaining the means suggests these disparate ends, these established modes of use of the means, with the result that the agent's "forward tendency" is checked. Shall the necessary sums be spent in foreign travel or shall they be spent in the present ways—in providing various physical necessities and comforts, or for various forms of amusement, or in increasing investments in business enterprises? These modes of use do not admit of ethical comparison with the plan of foreign travel, and the agent's interest must therefore now be centered on the means.

It is in this check to the agent's forward tendency that the logical status of the means is evinced. As merely so much money the means could only serve to further the execution of the purpose that is forming, since under the circumstances it could only prompt immediate expenditure. Like the subject in factual judgment, the means in economic judgment have their problematic aspect which as effectually hinders the desired use of them as could any palpable physical defect. This problematic aspect consists in the fact of the present established mode of use which the now-forming purpose threatens to disturb, and it is the agent's interest in this mode of use that turns his attention to the valuation of the means.

It need hardly be pointed out that in the economic life we find situations exactly corresponding to those of "conscience and temptation" and mechanical "pull and haul" which were discriminated in the ethical sphere and marked off from judgment properly so called. Indeed it seems reasonable to think, on general grounds of introspection, that these methods of decision (if they deserve the name) are, relatively speaking, more frequently relied upon in the economic than in the moral life. The economic method of true judgment is roundabout and more complex and more difficult than ethical, and involves a more express recourse to those

abstract conceptions which for the most part are only implicitly involved in valuation of the other type. The economic type of valuation, in fact, differs from the ethical, not in an absolute or essential way, but rather in the explicitness with which it brings to light and lays bare the vital elements in valuation as such. In general, then, the economic process would seem necessarily to embrace three stages, which will first of all be enumerated and then very briefly explained and discussed. These are: (1) a preliminary consideration of the means necessary to attain the end — which must be vague and tentative, of course, for the reason that the end as imagined is so, as compared with the fulness of detail which must belong to it before it can be finally accepted; (2) a consideration of the means, as thus provisionally taken, in the light of their present devotion to other purposes, this present devotion of them being the outcome, in some degree at least, of past valuation; (3) final definition of the means with reference to the proposed use through an adjustment effected between this and the factors involved in the past valuation.

1. In the first stage as throughout, it must be carefully noted, the means are under consideration not primarily in their physical aspect, but simply as *subject to a possible redisposition.* Thus it is not money as lawful currency receivable at the steamship office for an ocean passage, nor tools and materials and labor-power technically suitable for the production of a desired object, that is the subject of the economic judgment. The problem of redisposition would of course not be raised were the means not technically adaptable to the purpose, nor on the other hand can the means in the course of economic judgment, as a rule, escape some measure of further (factual) inquiry into their technical properties; but the standpoints are nevertheless distinct. Again, it must be noted that the means in this first stage will be only roughly measured. The length of one's stay

abroad, the size of the house one wishes to build, the purpose whatever it may be, is still undefined—these are in fact the very matters which the process must determine—and in the first instance it is "money in general" or "a large sum of money" with reference to which we raise the economic problem. The category of quantity is in fact essentially an economic one; it is essentially a standpoint for determining the means of action in such a way as to facilitate their economic valuation. The reader familiar with the writings of the Austrian school of economists will easily recall how uniformly in their discussions of the principle of marginal utility these writers assume outright in the first place the division of the stock of goods into definite units, and then raise the question of how the value of a unit is measured. The stock contains already a hundred bushels of wheat or ten loaves of bread—apparently as a matter of metaphysical necessity—whereas in fact the essential economic problem is this very one of how "wheat at large" comes to be put in sacks of a certain size and "bread in general" to be baked in twelve-ounce loaves. The subdivision of the stock and the valuation of the unit are not successive stages, but inseparably correlative phases of the valuation-process as a whole. The outcome may be stated either way, in accordance with one's interest in the situation.

2. But the unmeasured means as redisposable in an as yet undetermined way bring to consciousness established measured uses to which the means have been heretofore assigned in definite amounts. In this way the process of determining a definite quantum as redisposable (which is to say, of attaining to a definite acceptable plan of conduct) can begin. How, then, does this fact of past assignment to uses still recognized as desirable figure in the situation? In the first place the past assignment may have been (1) an outcome of past economic valuation, (2) an unhesitating or non-economic

act executive of an ethical decision, or (3) an act of more or less conscious obedience to "conscience" or "authority." In either case it now stands as a course of conduct which at the time was, in the way explained above, *sanctioned* to the agent, to the "energetic" self, by the means and conditions recognized as bearing upon it. In this sense, then, we have, in this recognition of the past adjustment and of the economic character which the means now have in virtue of it, what we may term a judgment of "energy-equivalence" between the means and their established uses. For to the agent it was the essential meaning of the sense of sanction felt when the means were assigned to these uses that the "energetic" self would on the whole be furthered thereby —and this in view of all the sacrifices that this use would entail, or in view of the sacrifices required for the production of the means, if the case were one in which the means were not at hand and could only be secured by a more or less extended production process.

In the illustration we have been considering, it will be observed, there is an extensive schedule of present uses which the new project calls in question and from which the means must be diverted. This is in fact the commoner case. A new use of money will affect, as a rule, not simply a single present mode of expenditure, but will very probably involve a readjustment throughout the whole schedule of expenditure which our separate past valuations of money have in effect co-operated in establishing. So likewise if we wish to use part of a store of building materials or of food, or of any other subdivisible commodity, we encounter an ordered system of consumption rather than a single predetermined use which we have not yet enjoyed. Where this is the case the whole process of valuation is greatly facilitated, but this is not essential. The means in cases of true economic valuation may be capable of but a single use, like a railroad ticket

or a perishable piece of fruit, or of a virtually endless series of uses, like a painting or a literary masterpiece. Whether the means figure as representing but a single use or stand for the conservation of an extensive system, their economic significance is the same. They are the "energy-equivalent" of this use or system of uses considered as an act or system of acts of consumption in furtherance of the self. Their past assignment meant then and means now simply this, that the "energetic" self would thereby gain more than it would lose through the inevitable sacrifices. This is the economic significance of the means in virtue of which they are now problematic to the extent of checking, for a time at least, forward tendency toward the desired end.[1]

3. The judgment of energy-equivalence, then, defines the inhibiting economic aspect of the means, and moreover defines it for the means as subdivided and set apart for a schedule of uses if this was the form of the past adjustments to which reference is made. The problem of the third stage of the process is that of "bringing subject and predicate together," as we have elsewhere expressed it — that is, of determining, in the light of the economic character of the means as just ascertained, what measure of satisfaction, if any, may be accorded to the new and as yet undefined desire. The new disposition of the means, if one is to be made, must bring to the "energetic" self a degree of furtherance and development which shall be sensibly as great as would come from the established method of consumption. The means, as economic,

[1] We use the expression "energy-*equivalent*" because the "excess" gained by the self through the past adjustment is not of importance at just this point. The essential significance of the means now is not that they "cost" less than they promised to bring in in energy, but that *because they required sacrifice the self will now lose unless they are allowed to fulfil the promise.* They are the logical equivalent of the established modes of consumption from the standpoint of conservation of the energies of the self, not the mathematical equivalent.

It would be desirable, if there were space, to present a brief account of the psychological basis of the concepts of energy and energy-equivalence which here come into play, but this must be omitted.

are means to the conservation of the old adjustment, and any new disposal of them or of any portion of them for a full or partial execution of the new purpose must make out at least as good a case. It must appear that the new disposition is not only physically possible, but also economically necessary in the light of the same principle of expansion of the self as sanctioned the disposition now in force. It must make the self in some way more efficient—whether more strong and symmetrical in body, more skilled in work, more clear of brain, or more efficient in whatever other concrete way may be desired.

Psychologically the sanction of any course of action which is taken as evidence of conformity to the general rule thus inadequately stated is the more or less strong sense of "relaxation" of attentive strain which comes with the shift of attention, in the final survey, from means to end. We may accordingly, for the sake of greater definiteness, restate in the following terms the process which has just been sketched: The ends in conflict at the outset are ends which do not sensibly bear upon each other through their dependence upon a common fund of psychical capacities or energies. They are related in the agent's experience solely through their dependence upon a common stock of physical means, and they do not therefore admit of adjustment through the ethical type of process. The economic process consists essentially of a revival in imagination of the experiences accompanying the former disposition of the means and a re-enforcement by these of the means in their adherence to that former and still recognized disposition. If an adapted form of the new end can be imagined which will mediate a like experience of relaxation when the attention shifts from the means, thus emotionally re-enforced in their economic status, to the end as thus conceived, the means will be recognized as economically redisposable. Thus the method of

valuation of the means makes possible, through appeal to the sensibly invariable experience of relaxation or assurance in the outcome of judgment, a co-ordination of disparate ends which the ethical method of direct adjustment could not effect.[1]

The economic process thus presents on analysis the same factors as does the ethical. On the subject side we have the means — which as economic are problematic as to their reapplicability. On the predicate side we have the suggested mode of reapplication in tension against conservative ideals of application to established purposes. Just as it may be held that the general ethical predicate is that of Right or Good — that is, deserving of adoption into the system of one's ends — so the economic predicate applied to the means as these come in the end to be defined is the general concept Reappliable. And in general the distinction of the types is not an ultimate one, for the more deliberately and rigorously the method of economic valuation is pursued — in such a case, for example, as that of the prospective emigrant — the stronger will be the agent's sense of a genuinely ethical sanction as belonging to the decision which is in the end worked out. The more certain and sincere, therefore, will be the agent's judgment that the means must be reapplied, for on the sense of sanction of which we speak rests the explicit judgment that the purpose formed is expansive of the self.

From the analysis thus presented it must appear, therefore, that the economic type of judgment is in our sense a constructive process. Its function is to determine a particular commodity or portion of a stock of some commodity in its economic character as *disposable*, and in performing this function it presents a definite reality in the economic

[1] Putting it negatively, the renunciation of the new end involves a "greater" sacrifice than all the sacrifices which adherence to the present system of consumption can compensate.

order. Moreover, in thus defining the particular, recourse is had to more or less distinctively namable economic standards which are in the last resort symbols representing established habits of consumption in the light of which the means, *prima facie*, seem not to be available for any other purposes. These economic standards, like ethical standards and the class concepts of science and our ordinary perceptual experience, are, with all due respect to nominalism, constitutive of a real world—a world which is real because it lends form and significance to our knowledge of particulars as stimuli to conduct.

We have now before us sufficient reason for our thesis that the valuation-process in both its forms is constructive of an order of reality, and we have sufficiently explained the relation which the economic order bears to the inclusive and logically prior order of ethical objects and relations. We are now in a position to see that in being thus constructive of reality (taking the conception in its proper functional meaning) they are at the same time constructive of the self, since the reality which they construct is in its functional aspect the assemblage of means and conditions, of stimuli, in short, for the development and expansion of the self. We shall bring this main division of our study to a close with a series of remarks in explanation and illustration of this view.

Let us consider once more the factors present in the agent's final survey of the situation after the completion of the judgment-process and on the verge of action. These factors are, as we have seen, (1) recognition of conditions sanctioning the purpose formed, (2) recognition of the purpose as, in view of this sanction, warranted to the "energetic" self as an eligible method of expansion and development, and (3) recognition of the "energetic" self, conversely, as in possession, in virtue of the favorable conditions given in

factual judgment, of this new method of furtherance. These three factors are manifestly not so much factors co-operating in the situation as inseparable aspects of it distinguishable from each other and admitting of discriminative emphasis in accordance with the degree of reflective power which the individual may possess or choose to exercise. Strictly speaking these three aspects are present in every conscious recognition of a purpose as one's own and as presently to be carried into effect, but they are not always present in equal conspicuousness, and never with equal logical importance for the individual. In fact this enumeration of aspects coincides with our enumeration of the three stages in the evolution of the individual's conscious moral attitude toward new purposes given in impulse—in the third of which the last named of these aspects comes to the fore with the others in logical or functional subordination to it.

Now it will be apparent on grounds of logic, as on the evidence of simple introspection, that in this third type of attitude—in the attitude of true valuation, that is to say—the energetic self cannot be indentified with the chosen purpose. The purpose is a determinate specified act to be performed subject to recognized conditions, and with the use of the co-ordinated means; the self, on the other hand, is a process to which this particular purpose is, indeed, from the standpoint of the self's conservation and increase, indispensable, but which is nevertheless apart from the purpose in the sense that without the purpose it would still be a self, though perhaps a narrower and less developed one. Our standpoint here as elsewhere, the reader must remember, is the logical. It is the standpoint of the agent's own interpretation of his experience of judgment during the judgment-process and at its close, and not the standpoint of the psychological mediation of this experience as a series of occurrences. Thus we are here far from wishing to deny the

general proposition that a man's purposes are an expression of his nature, as the psychologist might describe it, or the proposition that a man's conduct and his character are one and the same thing viewed from different points of view. We wish merely to insist upon the fact that these psychological propositions are not a true account of the agent's own experience of himself and of his purposes *while these latter are in the making or are on the verge of execution.* There is indeed no conflict between this "inside view" of the judgment-process and of the final survey and the psychological propositions just mentioned. The identity of conduct and character means not simply that as the man is so does he act, but quite as much, and in a more important way, that as he acts so is he and so does he become. It is, then, the essence of the agent's own view of the situation that his character is in the making and that the purpose is the method to be taken. To the agent the self is not, indeed, independent of the purpose, for plainly it is recognized that upon just this purpose the self is, in the sense explained, in a vital way dependent. Nevertheless the self is in the agent's apprehension essentially beyond the purpose, and larger than the purpose, and even, we may say, metaphysically apart from it. Now the conclusion which we wish to draw from this examination of the agent's attitude in judgment is that no formulation of an ideal self can ever be adequate to his purposes, not simply because any such formulation must, as Green allows, inevitably be incomplete and inconsistent, but because the self as a process is in the agent's own apprehension of it inherently incapable of formulation. Any formulation that might be attempted must be in terms of particular purposes (since in a modern ethical theory the self must be a "concrete" and not an abstract universal), and it is easy to see that any such would be, to the agent in the attitude of true ethical judgment, worse than useless. It

could as contentual and concrete only be a composite of existing standards, more or less coherently put together, offered to the agent as a substitute for the new standard which he is trying to work out. If there were not need of a new standard there would be no judgment-process; the agent must be, to say the least, embarrassed, even if the unwitting imposture does not deceive him, when such a composite, useful and indeed indispensable in its proper place as a standard of reference and a source of suggestion, is urged upon him as suitable for a purpose which in the very nature of the case it is logically incapable of serving.[1]

To the agent, then, the "energetic" self can never be represented as an ideal—can never be expressed in terms of purpose—since it is in its very nature logically incongruous with any possible particular purpose or generalization of such purposes. It is commonly imaged by the agent in some manner of sensuous terms, but it is imaged, in so far as the case is one of judgment in a proper sense, for use as a stimulus to the methodical process of valuation—not as a standard, which if really adequate would make valuation unnecessary. The agent's consciousness of himself as "energetic" cannot be an ideal; it comes to consciousness only through the endeavor, first to follow, and then, in a later stage of moral development, to use ideals, and has for its function, as a presentation, the incitement of the process of methodical use of standards in the control of the agent's

[1] Green, as is well known, allows that any formulation of the ideal self must be incomplete, but holds that it is not for this reason useless. But this is to assume that development in the ideal is never to be radically reconstructive, that the ideal is to expand and fill out along established and unchangeable lines of growth so that all increase shall be in the nature of accretion. The self as a system is fixed and all individual moral growth is in the nature of approximation to this absolute ideal. This would appear to be essentially identical in a logical sense with Mr. Spencer's hypothesis of social evolution as a process of gradual approach to a condition of perfect adaptation of society and the individual to each other in an environment to which society is perfectly adapted—a condition in which "perfectly evolved" individuals shall live in a state of blessedness in conformity to the requirements of "absolute ethics." For a criticism of this latter type of view see MR. TAYLOR'S above-mentioned work (chap. v, *passim*).

impulsive ends. It is not an anticipatory vision of the final goal of life, but the agent's coming to consciousness of the general impulse and movement of the life that is.

It is an inevitable consequence of acceptance of a contentual view of the "energetic" self as one's ideal that reflective morality should tend to degenerate into an introspective conscientiousness constantly in unstable equilibrium between a pharisaical selfishness on the one hand and a morally scarcely more dangerous hypocrisy on the other. There is certainly much justice in the stinging characterization of "Neo-Hegelian Egoism" which Mr. Taylor somewhere in his unsearchable book applies to the currently prevailing conventionalized type of idealistic ethics. If the self of the valuation-process is an ultimate goal of effort, then there must certainly be an irreconcilable contrast to the disadvantage of the latter between the plain man's objective desire for right conduct, as such, and for the welfare of his fellow-beings, and the moralist's anxious questionings of the rectitude of the motives by which his conformity to the fixed moral standard are prompted.[1] Into the value and significance of the attitude of conscientious examination of one's moral motives we are not here concerned to inquire, but need only insist, in accordance with our present view, that its value must be distinctly subordinate and incidental to the general course and outcome of the valuation-process. In the valuation-process, consciousness of self is not an object of solicitude, but simply, we repeat, a pure presentation of stimulus, having for its office the incitement, and if need be the reincitement, of the attitude of deference to the suggestions of old standards and openness to the petitions of new impulse, and of methodically bringing these to bear upon each other.

[1] For GREEN'S cautious defense of conscientiousness as a moral attitude see the *Prolegomena to Ethics*, Book IV, chap. i; and for a statement of the present point of view as bearing upon Green's difficulty, see DEWEY, *The Study of Ethics: A Syllabus*, p. 37 *ad fin.*, and *Philosophical Review*, Vol. II, pp. 661, 662.

The outcome of such a process, of course, cannot be predicted—and for the same reasons as make unpredictable the scientist's factual hypothesis. Just as the scientist's data are incomplete and ill-assorted and unorganized, for the reason that they have, of necessity, been collected, and must at the outset be interpreted, in the light of present concepts, whose inadequacy the very existence of the problem at issue demonstrates, so the final moral purpose that shall be developed is not to be deduced from any possible inventory of the situation as it stands. The process in both cases is one of reconstruction, and the test of the validity of the reconstruction must in both cases be of the same essentially practical character. In both cases the process is constructive of reality, in the functional signification of the term. In both, the judgment process is constructive also of the self, in the sense that upon the determination of the agent's future attitude the cumulative outcome of his past attitudes is methodically brought to bear.[1]

V

Judgments of value are, then, objective in their import in the same sense as are the factual judgments in which the conditions of action are presented. The ideal problematic situation is, in the last resort, ethical, in the sense of requiring for its solution determination of the new end that has arisen with reference to existing standards. In structure and in function the judgment in which the outcome of this process is presented is knowledge, and objective in the only valid acceptation of the term.

[1] Along the line thus inadequately suggested might be found an answer to certain criticisms of the attempt to dispense with a metaphysical idea of the self. Such criticisms usually urge that without reference to a metaphysical ideal no meaning attaches to such conceptions as "adjustment," "expansion," "furtherance," and the like as predicated of the moral acts of an agent in their effect upon the "energetic" self. Anything that one may do, it is said, is expansive of the self, if it be something new, except as we judge it by a metaphysical ideal of a rightly expanded self. For an excellent statement of this general line of criticism see STRATTON, "A Psychological Test of Virtue," *International Journal of Ethics*, Vol. XI, p. 200.

But, after all, it may be urged, is it not the essential mark of the objective that it should be accessible to all men, and not in the nature of the case valid for only a single individual? At best the objectivity of content which has been made out for the judgment of value is purely functional, and not such as can be verified by appeal to the consensus of other persons. The agent's *assurance* of the reality of the economic or ethical subject-matter which he is endeavoring to determine, and his sense of the objectivity of the results which he reaches, need not be denied. These may well enough be illusions of personal prejudice or passion, or even normal illusions of the reflective faculty, like that of interpreting the secondary qualities of bodies as objective in the same sense as are the "bulk, figure, extension, number, and motion of their solid parts."[1] Any man can see the physical object to which I point, and verify with his own eyes the qualities which I ascribe to it, but no man can either understand or verify my judgment that the purpose I have formed is in accord with rational ideals of industry and self-denial, or that this portion of my winter's fuel may be given to a neighbor who has none.

But this line of objection proves too much, for, made consistent with itself, it really amounts to a denial that the very judgment of sense-perception, to which it appeals so confidently as a criterion, has objective import. The first division of this study was intended to show that every object

[1] The polemic of certain recent writers (as, for example, EHRENFELS in his *System der Werttheorie*) against the objectivity of judgments of value appears to rest upon an uncritical acceptance of the time-honored distinction between "primary" and "secondary" qualities as equivalent to the logical distinction of subjective and objective. Thus EHRENFELS confutes "das Vorurteil von der objectiven Bedeutung des Wertbegriffes" by explaining it as due to a misleading usage of speech expressive of "an impulse, deep-rooted in the human understanding, to objectify its presentations" and then goes on to say "We do not desire things because we recognize the presence in them of a mysterious impalpable essence of Value but we ascribe value to them because we desire them." (*Op. cit.*, Bd. I, p. 2.) This may serve to illustrate the easy possibility of confusing the logical and psychological points of view, as likewise does EHRENFELS's formal definition of value. (Bd. I., p. 65.)

in the experience of each individual is for the individual a unique construction of his own, determined in form and in details by individual interests and purposes, and therefore different from that object in the experience of any other individual which in social intercourse passes current as the same. The real object is for me the object which functions in my experience, presenting problematic aspects for solution, and lending itself more or less serviceably to my purposes; and this object is, we hold, not the object as socially current, but the complete object which, as complete in its determination with reference to my unique purposes, cannot possibly have social currency. The objection as stated cuts away the very ground on which it rests, since the shortcoming which it finds in the judgment of ethical or economic value is present in the particular judgment of sense-perception also. The object about which I can assure myself by an immediate appeal to other persons is the object in its bare "conceptual" aspects — the object as a dictionary might define it, the commodity as it might be described in a trade catalogue, or the ethical act as defined by the criminal code or in the treatise of a moral philosopher. It is an object consisting of a central core or fixed deposit of meaning, which renders it significant in a certain general way to a number of persons, or even to all men, but which is not yet adequately known by me from the standpoint of my present forming purpose. In virtue of these conceptual characters it is adaptable to my purpose, which is as yet general and indeterminate; but in the nature of the case it cannot yet be known to me as applicable to my prospective concrete purpose, as this shall come to be through judgment.

Thus, if the test of objectivity of import is to be that the judgment shall present an object or a fact which, as presented, is socially current among men and not shut away in

the individual intelligence apart from the possibility of social verification, then the apparent nominalism of the objection we are considering turns out to be the uttermost extreme of realism. Such a test amounts to a virtual affirmation that the sole objective reality is the conceptual, and that the "accidents" of one's particular object of sense-perception are the arbitrary play of private preference or fancy. At this point, however, the objection may shift its ground and take refuge in some such position as the following: The real object is indeed the object which the individual knows in relation to his particular purpose, and it is indeed impossible that the individual's judgment should be limited in its content to coincidence with the conceptual elements of meaning which are socially current. The building-stone which one has judged precisely fit for a special purpose, the specimen which the mineralogist or the botanist examines under his microscope, the tool whose peculiarity of working one has learned to make allowance for in use—these all are, of course, highly individual objects, possessing for the person in question an indefinite number of objective aspects of which no other person can possibly be conscious at the time. And, more than this, even though the individual may, in his scrutiny of the object, have discovered no conspicuous new qualities in it which were not present in the socially current meaning, the object will still possess an individuality making it genuinely unique merely through its co-ordination with other objects in the mechanical process of working out the purpose in hand. It is at least an object standing here at just this time, a tool cutting this particular piece of stone and striking at this instant with this particular ringing sound, and these perhaps wholly nonessential facts will nevertheless serve to individualize the object (if one chances to think of them) in the sense of making it such a one as no other person knows. All this may be granted, the objec-

tion may allow, and yet the vital point remains; for this is not what it was intended, even in the first place, to deny. The vital point at issue is not whether the object which I know *is* known as I know it by any other person, but whether, in the nature of things, it is one that *can* be so known.

Herein, then, lies the difference between judgments of fact and judgments of value. The mineralogist can train his pupil to see precisely what he himself sees; and so likewise in any case of sense-perception, the object, however recondite may be the qualities or features which one may see in it, *can* nevertheless be seen by any other person in precisely the same way on the single, more often not insuperably difficult, condition that the discoverer shall point these out or otherwise prepare the other for seeing them. But with the ton of coal which one may judge economically disposable for a charitable purpose the case stands differently, since it is not in its visible or other physical aspects that the ton of coal is here the subject of the judgment. It is as having been set apart *by oneself exclusively* for other uses that the ton of coal now functions as an object and now possesses the character which the economic judgment has given it; and the case stands similarly with a contemplated act, of telling the truth in a trying situation. The valuation placed upon the commodity or upon the moral act depends essentially upon psychological conditions of temperament, disposition, mood, or whim into which it would be impossible for another person to enter, and these depend upon conditions of past training and native endowment which can never occur or be combined in future in precisely the same way for any other individual. In short, the physical object is *describable* and *can* be made socially current, though doubtless with more or less of difficulty, if other persons will attend to it and learn to see it as I see it; but the value

of an economic object or a moral act depends upon my desires and feelings, and therefore must remain a matter of my private appreciation.

In answering this amended form of the objection it is entirely unnecessary to discuss the issue of fact which it has raised as to whether or not complete description of a physical object or event is a practical or theoretical possibility. It need only be pointed out that at best such complete description can only be successful in its purpose on condition that the individual upon whom the experiment is tried be willing to attend and have the requisite "apperceptive background." The accuracy with which another person's knowledge shall copy the knowledge which I endeavor to impart to him must manifestly depend upon these two leading conditions, not to mention also the measure of my own pedagogical and literary skill. Any consideration of such a purely psychological problem as is here suggested would be entirely out of place in a discussion the purpose of which is not that of analyzing the process of judgment, but that of interpreting its meaning aspects. Let us grant the entire psychological possibility of making socially current in the manner here suggested the most highly individual and concrete cognition of an object one may please, and let us grant, moreover, that this possibility has been actually realized. This concurrent testimony of the witness will doubtless confirm one's impression of the accuracy of the process of observation and inference whereby the knowledge which has been imparted was first gained, but we must deny that it can do more than this. For indeed, apart from some independent self-reliant conviction of the objective validity of the knowledge in question, how should another's assent be taken as *confirmation* and not rather as evidence of one's own mere skill in suggestion and of the other's susceptibility thereto? We must deny that even in the improved form the criterion of social currency is a valid

one. In a word, the social currency of knowledge to the extent to which it can exist requires as its condition, and is evidence of, the equal social currency of certain interests, purposes, or points of view for predication; and if it be possible to make socially current an item of concrete knowledge, with all its concrete fulness of detail, then *a fortiori* it must be possible to make socially current the concrete individual purpose with reference to which this item of knowledge first of all took form. Whether such a thing be psychologically possible at all the reader may decide; but if it be possible in the sphere of knowledge of fact, then it must be possible in the sphere of valuation. In short, judgment in either field, in definition of a certain object or commodity or moral act as, for the agent, an objective fact possessing certain characters, involves the tacit assumption of social verifiability as a matter of course; but it does not rest upon this assumption, nor is this assumption the essence of its meaning. To say that my judgment is socially verifiable, that my concrete object of perception or of valuation would be seen as I see it by any person in precisely my place, is merely a tautological way of formally announcing that *I have made the judgment* and have now a definite object which to me has a certain definite functional meaning.

Thus, instead of drawing a distinction between the realms of fact and value, as between what is or can be common to all intelligent beings and what must be unique for each individual one, we must hold that the two realms are coextensive. The socially current object answers to a certain general type of conscious purpose or interest active in the individual and so to a general habit of valuation, and the concrete object to a special determination of this type of purpose with reference to others in the recognized working system of life. The agent's final attitude, on the conclusion of the judgment-process, may be expressed in either sort of

judgment—in a judgment of the value of commodity or moral purpose, or in a judgment of concrete fact setting forth the "external" conditions which warrant the purpose to the "energetic" self. Throughout the judgment-process there is a correlation between the movement whereby the socially current object develops into the adapted means and that whereby the socially current type of conduct develops into the defined and valued purpose.[1]

At this point, however, a second general objection presents itself. However individual the content of my knowledge of physical fact may be, and however irrelevant, from the logical point of view, to my confidence in its objective validity may be the possibility of sharing it with other persons, nevertheless it refers to an object which is in some sense permanent, and therein differs from my valuations. In economic valuation I reach a definition of a certain commodity and am confirmed in it by all the conditions that enter into my final survey of the situation. But my desire for the new sort of consumption may fail, and so expose my valuation to easy attack from any new desire that may arise; or my supply of the commodity in question may be suddenly increased or diminished, and my valuation of the unit quantity thereby changed. Likewise my ethical valuation may have to be reversed (as Mr. Taylor has insisted) by reason of a change of disposition or particular desire which makes impossible, except in obedience to some other and inclusive valuation, further adherence to it. And these changes take place without any accompanying sense of their doing violence to objective fact or, on the other hand, any judgment of their

[1] The essential dependence of factual judgment upon the rise of economic and ethical conflict is implied in the widely current doctrine of the teleological character of knowledge. It is indeed nowadays something like a commonplace to say in one sense or another that knowledge is relative to ends, but it is not always recognized by those who hold this view that an end never appears as such in consciousness alone. The end that guides in the construction of factual knowledge is an end in ethical or economic conflict with some other likewise indeterminate end in the manner above discussed.

being in the nature of corrections of previous errors in valuation, and so more closely in accordance with the truth. Moreover, a new valuation, taking the place of an old, does not supplement its predecessor as one set of judgments about a physical object may supplement another, made from a different point of view, but does literally take its place, and this without necessarily condemning it as having been erroneous.

This general objection rests upon a number of fairly obvious misconceptions, and its strength is apparent only. In the first place, the question of the objectivity of any type of judgment must in the end, as we have seen, reduce itself to a question of the judgment's import to the agent. However the agent's valuations may shift from time to time, each several one will be sanctioned to the agent by the changed conditions exhibited in the inventory which the agent takes at the close of judgment which has formed it. The conditions have changed, and the valuation of the earlier purpose has likewise changed; but the new purpose is sanctioned by the new conditions, and the test of the presumed validity of the new valuation can only be in the manner already discussed[1] the test of actual execution of the purpose. In the change, as the agent interprets the situation, there is no violation of the former purpose nor a nearer approach to truth. Each valuation is true for the situation to which it corresponds. We are obviously not here considering the case of error. An error in valuation is evidenced to the agent, not by the need of a new valuation answering to changed conditions, but by the failure of a given valuation to make good its promise, although to all appearance conditions have remained unchanged. If the conditions have changed, then the purpose and the conditions *must* be redetermined, if the expansion of the "ener-

[1] See above, pp. 282, 283.

getic" self is to continue; but the former valuation does not thereby become untrue.

These brief remarks should suffice by way of answer, but it will serve advantageously to illustrate our general position if we pursue the objection somewhat farther. The physical object is, nevertheless, *permanent*, it will be said, and this surely distinguishes it from the object (now freely acknowledged as such) of the value-judgment. To one man gold may be soluble in *aqua regia* and to another worth so many pence an ounce, but different and individual as are these judgments and the standpoints they respectively imply, the gold is *one*, impartially admitting at the same time of both characterizations. On the other hand, one cannot judge an act good and bad at once. The purpose of deception that may be good is one controlled and shaped by ideals quite different from those which permit deception of the evil sort — is, in truth, taken as a total act, altogether different from the purpose of deception which one condemns, and not, like the "parcel of matter" in the two judgments about gold, the subject of both valuations.

A brief consideration of the meaning of this "parcel of matter" will easily expose the weakness of the plea. In the last analysis the "parcel of matter" must for the agent reduce itself, let us say, to certain controllable energies centering about certain closely contiguous points in space and capable, in their exercise, of setting free or checking other energies in the system of nature. Thus, put in *aqua regia* the gold will dissolve, but in the atmosphere it retains its brilliant color, and in the photographer's solution its energies have still a different mode of manifestation. And thus it would appear that the various predicates which are applied to "gold" imply, each one, a unique set of conditions. Gold is soluble in *aqua regia*, but not if it is to retain its yellow luster; which predicate is to be true of it depends upon the

conditions under which the energies "resident in the gold" are to be set free, just as the moral character of an act depends upon the social conditions obtaining at the time of its performance—that is, upon the ideals with reference to which it has been shaped in judgment. How can one maintain that in a literal and concrete physical sense gold in process of solution is the "same" as gold entering into chemical combination? Surely the energy conditions which constitute the "gold" in the two processes are not the same—and can one nowadays hope to find sameness in unchangeable atoms?[1]

In a word, the permanent substance or "real essence" that admits of various mutually supplementary determinations corresponding to diverse points of view is, strictly speaking, a convenient abstraction, and not an existent fact in time—and we shall maintain that the same species of abstraction has its proper place, and in fact occurs, in the sphere of moral judgment. The type of moral conduct that in every actual case of its occurrence in the moral order is determined in some unique and special way by relation to other standards is precisely analogous to the "substance" that is now dissolved in *aqua regia* and now made to pass in the form of current coin, but cannot be treated in both ways at once. Both are abstractions. The "gold" is a name for the general possibility of attaining any one of a certain set of particular ends by appropriately co-ordinating certain energies, resident elsewhere in the physical system, with those at present stored in this particular "parcel of matter;" the result to be attained depends not alone upon the "parcel of matter," but also upon the particular energies brought to bear upon it from without. Now let us take a type of conduct which is sometimes judged good and sometimes bad Deception, for example, is such a type—and

[1] *Cf.* SCHILLER, *Riddles of the Sphinx*, chap. vii, §§ 10–14.

as a type it simply stands for the general possibility of furtherance or detriment to the "energetic" self according as it is determined in the concrete instance by ideals of social well-being or by considerations of immediate personal advantage.

For the type-form of conduct—when considered, not as a type of mere physical performance, but as conduct in the technical sense of a possible purpose of the self—is, in the sense we have explained, a symbol for the general possibility of access or dissipation of spiritual energy—energy which must be set free by the bringing to bear of other energies upon it, and which furthers or works counter to the enlargement and development of the self according to the mode of its co-ordination with other energies which the self has already turned to its purposes.[1] But actual conduct is concrete always and never typical; and so likewise, we have sought to show, actual "substance," the objective thing referred to in the factual judgment, is always concrete and never an essence. It is not a fixed thing admitting of a simultaneous variety of conflicting determinations and practical uses, but absolutely unique and already determined to its unique character by the whole assemblage of physical conditions which affect it at the time and which it in turn reacts upon. In the moral as in the physical sphere the fundamental category would, on our present account, appear to be that of energy. The particular physical object given in judgment is a concrete realization, in the form of a particular means or instrument, of that general possibility of attaining ends which the concept of a fixed fund of energy, interpreted as a logical postulate or principle of inference, expresses. The particular moral or economic act is a particular way in which the energy of the self may be increased

[1] It would appear that the principle of the conservation of energy is valid only in the physical sphere; but the logical significance of this limitation cannot be here discussed.

or diminished. In both spheres the reality presented in the finished judgment is objective as being a stimulus to the setting free of the energies for which it stands. Once more, then, our answer to the objection we have been considering must be that the object as the permanent substrate is merely an abstract symbol standing for the indeterminate means in general set over against the self. Corresponding to it we have, on the other side, the concept of the "energetic" self—the self that is purposive in general, expansive somehow or other.

The function of completed factual judgment in the development of experience is, we have held, that of warranting to the agent the completed purpose which his judgment of value expresses. This view calls for some further comment and illustration in closing the present division. In the first place the statement implies that the conditions which factual judgment presents in the "final survey" as sanctioning the purpose have not *determined* the purpose, since prior to the determination of the purpose the conditions were not, and could not be, so presented. The question, therefore, naturally arises whether our meaning is that in the formation of our purposes in valuation the recognition of existing conditions plays no part. Our answer can be indicated only in the barest outline as follows:

The agent must, of course, in an economic judgment-process, recognize and take account of such facts as the technical adaptability of the means he is proposing to use to the new purpose that is forming, as also of environing conditions which may affect the success which he may meet with in applying them. He must consider also his own physical strength and qualities of mind with a view to this same technical problem. And similarly in ethical valuation, as we have seen, the psychology of the "empirical ego"

must play its part. But the conditions thus recognized are, as we might seek to show more in detail, explainable as the outcome of past factual judgment-processes, and on the occasion of their original definition in the form in which they now are known played the sanctioning part of which we have so often spoken. They therefore correspond to the agent's accepted practical ideals, so that the control which his past experience exercises over his present conduct may be stated equally well in either sort of terms—in terms of his prevailing recognized standards, or in terms of his present knowledge of the conditions which his new purpose must respect. Thus, in general, the concept of a physical order conditioning the conduct of all men and presented in a definite body of socially current knowledge is the logical correlate of the moral law conceived as a categorical imperative prescribing certain types of conduct.

Thus the error of regarding the agent's conduct in a present emergency as an outcome of existing determining conditions is logically identical with the corresponding error of the ethical theory of self-realization. The latter holds the logical possibility of a determinate descriptive ideal (already realized in the unchanging Absolute Self) which is adequate to the solution of all possible ethical problems. The former holds that all conduct must be subject to the determining force of external conditions which, if not at present completely known, are at least in theory knowable. The physical universe in its original nebulous state contained the "promise and potency" of all that has been in the way of human conduct and of all that is to be. Into the fixed mechanical system no new energy can enter and from it none of the original fund of energy can be lost. This mechanical theory of conduct is the essential basis of the hedonistic theory of ethics; and it would not be difficult to show that Green's criticism of this latter and his

own affirmative theory of the moral ideal (as also the current conventional criticism of hedonism in the same tenor by the school of Green) are in a logical sense identical with it. For the assumption that conduct is determined by existing objective conditions is precisely the logical correlate of the concept of a contentual and "realizable" ideal moral self.[1]

We may now interpret, in the light of our general view of the function of factual judgment, the concept of the "empirical self" referred to in our discussion of the various types of sanctioning condition which may enter into the "final survey." The "empirical self" of psychological science is a construction gradually put together by psychologist or introspective layman as an interpretation of the way in which accepted concrete modes of conduct, in the determination of which standards have been operative, have worked out in practice to the furtherance or impoverishment of the "energetic" self. We have seen that the ambiguous presented self which functions in the moral attitude of obedience to authority or to conscience gives place in the attitude of conscious valuation to apprehension of the "energetic" self, on the one hand, and descriptive concepts of particular types of conduct, on the other. The "empirical self" at the same time makes its appearance as a constantly expanding inventory of the "spiritual resources" which the "energetic" self has at its disposal. These are the functions of the soul which a functional psychology shows us in operation—powers of attention, strength of memory, fertility in associative recall, and the like—and these are the resources wherewith the "energetic" self may execute, and so exploit to its

[1] That the assumption mentioned is the essential basis of the twin theories of associationism in psychology and hedonism in ethics is shown by DR. WARNER FITE in his article, "The Associational Conception of Experience," *Philosophical Review*, Vol. IX, pp. 283 ff. *Cf.* MR. BRADLEY'S remarks on the logic of hedonism in his *Principles of Logic*, pp. 244–9.

own furtherance, the purposes which, in particular emergencies, new end and recognized standards may work out in co-operation.[1]

VI

In the foregoing pages we have consistently used the expressions "ethical and economic judgment" and "judgment of valuation" as synonymous. This may have seemed to the reader something very like a begging of the question from the outset, as taking for granted that very judgmental character of our valuational experience which it was the professed object of our discussion to establish. We are thus called upon very briefly to consider, first of all, the relations which subsist between the consciousness of value and the process which we have described as that of valuation. This will enable us, in the second place, to determine the logical function which belongs to the consciousness of value in the general economy of life. The consciousness of value is a perfectly definite and distinctive psychical fact mediated by a doubtless highly complex set of psychical or ultimately physiological conditions. As such it admits of descriptive analysis, and in a complete theory of value such descriptive analysis should certainly find a place. It would doubtless

[1] The "energetic" self is apparently MR. BRADLEY'S fourth "meaning of self," the self as monad—"something moving parallel with the life of a man, or, rather, something not moving, but literally *standing* in relation to his successive variety" (*Appearance and Reality* [1st ed.] p. 86, in chap. ix, "The Meanings of the Self"). Mr. Bradley's difficulty appears to come from his desiring a psychological content for what is essentially a logical conception—a confusion (if we may be permitted the remark) which runs through the entire chapter to which we refer and is responsible for the undeniable and hopeless incoherency of the various meanings of the self, as Mr. Bradley therein expounds them. "If the monad stands aloof," says Mr. Bradley, "either with no character at all or a private character apart, then it may be a fine thing in itself, but it is a mere mockery to call it the self of a man" (p. 87). Surely this is to misconstrue and then find fault with that very character of essential *logical* apartness from any possibility of determination in point of descriptive psychological content which constitutes the whole value of the "energetic" self as a logical conception stimulative of the valuation-process and so inevitably of factual judgment. See pp. 258, 259, above. The reader may find for himself in Mr. Bradley's enumeration of meanings our concept of the empirical self. But surely the "energetic" and empirical selves would appear on our showing to have no necessary conflict with each other.

throw much light upon the origin of valuation as a process, and of valuing as an attitude, and admirably illustrate the view of the function of the consciousness of value to which a logical study of valuation as a process seems to lead us. This problem in analysis belongs, however, to psychology, and therefore lies apart from our present purpose; nor is it necessary to the establishment of our present view to undertake it. It is necessary for our purpose only to suggest, for purposes of identification, a brief description of the value-consciousness, and to indicate its place in the process of reflective thought.

The consciousness of value may best be described, by way of first approximation, in the language of the Austrian economists as a sense of the "importance" to oneself of a commodity or defined moral purpose. It belongs to the agent's attitude of survey or recapitulation which ensues upon the completion of the judgment-process and is mediated by attention to the ethical or economic object in its newly defined character of specific conduciveness to the well-being of the self. The commodity, in virtue of its ascertained physical properties, is adapted to certain modes of use or consumption which, through valuation of the commodity, have come to be accepted as desirable. The moral act likewise has been approved by virtue of its having certain definite sociological tendencies, or being conducive to the welfare and happiness of a friend. Thus commodity or moral act, as the case may be, has a determinate complexity of meaning which has been judged as, in one sense, expansive of the self, and the value-consciousness we may identify as that sense of the valued object's importance which is mediated by recognition of it as the bearer of this complexity of concrete meaning. The meaning is, as we may say, "condensed" or "compacted" into the object as given in sense-perception, and because the meaning stands for ex-

pansion of the self, the object in taking it up into itself receives the character of importance as a valued object.

The sense of importance thus is expressive of an attitude upon the agent's part. The concrete meanings which make up the content of the object's importance would inevitably, if left to themselves, prompt overt action. The commodity would forthwith be applied to its new use or the moral act would be performed. The self would, as we may express it, possess itself of the spiritual energies resident in the chosen purpose. The attitude of survey, however, inhibits this action of the self and the sense of importance is the resulting emotional apprehension of the value of the object hereby brought to recognition. Now, it should be carefully observed that the particular concrete emotions appropriate to the details of the valued purpose are not what we here intend. The purpose may spring from some impulse of self-interest, hatred, patriotism, or love, and the psychical material of its presentation during the agent's survey will be the varied complex of qualitative emotion that comes from inhibition of the detailed activities which make up the purpose as a whole. So also the apprehension of the physical object of economic valuation is largely, if not altogether, emotional in its psychical constitution. Psychologically these emotions *are* the purpose—they are the "stuff" of which the purpose as a psychical fact occurring in time is made. But we must bear in mind that it is not the purpose as a psychical fact that is the object of the agent's valuing—any more than is the tool with which one cuts perceived as a molecular mass or as an aggregation of centers of ether-stress. As a cognized object of value the purpose is, in our schematic terminology, a source of energy for the increase of the self, and thus the consciousness of value is the perfectly specific emotion arising from restraint put upon the self in its movement of appropriation of this energy. In contrast with the concrete emotions which

are the substance of the purpose as presented, the consciousness of value may be called a "formal" emotion or the emotion of a typical reflective attitude.

The valuing attitude we may then describe as that of "resolution" on the part of the self to adhere to the finished purpose which it now surveys, with a view to exploitation of the purpose. The connection between the valuation-process and the consciousness of value may be stated thus: The valuation-process works out (and necessarily in cognitive, objective terms) the purpose which is valued in the agent's survey. But this development of the purpose is at the same time determination of the "energetic" self to acceptance of the purpose that shall be worked out. Thus the valuation-process is the source of the consciousness of value in the twofold way (1) of defining the object valued, and (2) of determining the self to the attitude of resolution to adhere to it and exploit it.[1] The consciousness of value is the apprehension of an object in its complete functional character as a factor in experience.

The function of the consciousness of value must now be very briefly considered. The phenomenon is a striking one, and apparently, as the economists especially have insisted, of much practical importance in the conduct of life.[2] And yet on our account of the phenomenon, as it may appear, the problem of assigning to it a function must be, to say the least, difficult. For the consciousness of value is, we have held, emotional, and, on the conception of emotion in general which we have taken for granted throughout our present discussion, this mode of being conscious is merely a reflex of a state of tension in activity. As such it merely reports in consciousness a process of motor co-ordination already going on and in the nature of the case can contribute nothing to the outcome.

[1] In the first of these inseparable aspects valuation is determinative of Rightness and Wrongness; in the second it presents the object as Good or Bad. See p. 259, above.

[2] See, for example, WIESER, *Natural Value* (Eng. trans.), p. 17.

Now if it were in a direct way as immediately felt emotion that the consciousness of value must be functional if functional at all, then the problem might well be given up; but it would be a serious blunder to conceive the problem in this strictly psychological way. A logical statement of the problem would raise a different issue—not the question of whether emotion as emotion can in any sense be functional in experience, but whether the consciousness of value and emotion in general may not receive reflective interpretation and thereby, becoming objective, play a part as a factor in subsequent valuation-processes. Indeed, the psychological statement of the problem misses the entire point at issue and leads directly to the wholly irrelevant general problem of whether any mode of consciousness whatever can, *as consciousness*, put forth energy and be a factor in controlling conduct. The present problem is properly a logical one. What is the agent's apprehension of the matter? In his subsequent reflective processes of valuation does the consciousness of value, which was a feature of the survey on a past occasion, receive recognition in any way and so play a part? This is simply a question of fact and clearly, as a question relating to the logical content of the agent's reflective process, has no connection with or interest in the problem of a possible dynamic efficacy of consciousness as such. The question properly is logical, not psychological or metaphysical.

Thus stated, then, the problem seems to admit of answer —and along the line already suggested in our account of economic valuation.[1] Recognition of the fact that the consciousness of value was experienced in the survey of a certain purpose on an earlier occasion confirms this purpose, holding the means, in an economic situation, to their appointed use and strengthening adherence to the standard in the ethical

[1] See pp. 307–12 above.

case. This recognition serves as stimulus to a reproduction, in memory, of the cognitive details of the earlier survey, and so in the ideal case to a more or less complete and recognizably adequate reinstatement of the earlier valuing attitude, and so to a reinstatement of the consciousness of value itself. The result is a strengthening of the established valuation, a more efficacious control of the new end claiming recognition, and an assured measure of continuity of ethical development from the old valuation to the new. The function thus assigned to the consciousness of value finds abundant illustration elsewhere in the field of emotion. The stated festivals of antiquity commemorative of regularly recurrent phases of agricultural and pastoral life, as also the festivals in observance of signal events in the private and political life of the individual, would appear to find, more or less distinctly, here their explanation. These festivals must have been prompted by a more or less conscious recognition of the social value inherent in the important functions making up the life of the community, and of the individual citizen as a member of the community and as an individual. They secured the end of a sustained and enhanced interest in these normal functions by effecting, through a symbolic reproduction of these, an intensified and glorified experience of the emotional meaning normally and inherently belonging to them.[1] In the same way the rites of the religious cults of Greece, not to mention kindred phenomena so abundantly to be found in lower civilizations as well as in our own, served to fortify the individual in a certain consistent and salutary course of institutional and private life.[2]

[1] The illustration, as also the general principle which it here is used to illustrate, was suggested some years since by Professor G. H. Mead in a lecture course on the "History of Psychology," which the writer had the advantage of attending.

[2] The conservative function of valuation may be further illustrated by reference to the well-known principle of marginal utility of which we have already made mention (p. 307 above), and which has played so great a part in modern economic theory. The value of the unit quantity of a stock of any commodity is, according to

It has been taken for granted throughout that there are but two forms of valuation-process, the ethical and the economic. The reason for this limitation may already be sufficiently apparent, but it will further illustrate our general conception of the valuation-process briefly to indicate it in detail. What shall be said, for example, of the common use of the term "value" in such expressions as the "value of life," the "emotional value" of an object or a moral act, the "natural value" of a type of impulsive activity? In these uses of the word the reference is apparently to one's own incommunicable inner experience of living, of perception of the object, or of the impulse, which cannot be suggested to any other person who has not himself had the experience. My pleasure, my color-sensation in its affective aspect, my emotion, are inner and subjective, and I distinguish them by such expressions as the above from the visible, tangible object to which I ascribe them as constituting its immediate or natural value to me. This broader use of the term "value" has not found recognition in the foregoing pages, and it requires here a word of comment. So long as these phases of the experience of the object are not recognized as separable in thought from the object viewed as an external condition or means, they would apparently be better characterized in some other way. If, however, they are so recognized, and are thereby taken as determinative of the agent's practical attitude toward the thing, we have merely our typical situation of ethical valuation of some implied purpose as conducive to the self and economic valuation of the means as requisites for

this principle, measured by the least important single use in the schedule of uses to which the stock as a whole is to be applied. Manifestly, then, adherence to this valuation placed upon the unit quantity is in so far conservative of the whole schedule and the marginal value is a "short-hand" symbol expressive of the value of the whole complex purpose presented in the schedule. Moreover, the increase of marginal value concurrently with diminution of the stock through consumption, loss, or reapplication is not indicative so much of a change of purpose as of determination to adhere to so much of the original program of consumption as may still be possible of attainment with the depleted supply of the commodity.

execution of the purpose. Our general criterion for the propriety of terming any mode of consciousness the *value* of an object must be that it shall perform a logical function and not simply be referred to in its aspect of psychical fact. The feeling or emotion, or whatever the mode of consciousness in question may be, must play the recognized part, in the agent's survey of the situation, of prompting and supporting a definite practical attitude with reference to the object. If, in short, the experience in question enters in any way into a conscious purpose of the agent, it may properly be termed a value.[1]

Æsthetic value also has not been recognized, and for the opposite reason. The sense of beauty would appear to be a correlate of relatively perfect attained adjustment between the agent and his natural environment or the conditions suggested more or less impressively by the work of art. There must, indeed, be present in the æsthetic experience an element of unsatisfied curiosity sufficient to stimulate an interest in the changing or diverse aspects of the beautiful object, but this must not be sufficient to prompt reflective judgment of the details presented. On the whole, the æsthetic experience would appear to be essentially post-judgmental and appreciative. It comes on the particular occasion, not as the result of a judgment-process of the valuational type, but as an immediate appreciation. As an immediate appreciation it has no logical function and on our principles must be denied the name of value. Our standpoint must be that of the experiencing individual. The æsthetic experience as a type may well be a development out of the artistic and so find

[1] Thus except on this condition we should deny the propriety of speaking of the value of a friend or of a memento or sacred relic. The purpose of accurate definition of the function of such objects as these in the attainment of one's ends is foreign to the proper attitude of loving, prizing, or venerating them. We may ethically value the *act* of sacrifice for a friend or of solicitous care of the memento,but the object of our sacrifice or solicitude has simply the direct or immediate "qualitative" emotional character appropriate to the kinds of activity to which it is the adequate stimulus.

its ultimate explanation in the psychology of man's primitive technological occupations in the ordinary course of life. It is, as we have said, of the post-judgmental type, and so may very probably be but the cumulative outcome of closer and closer approximations along certain lines to a perfected adjustment with the conditions of life. It may thus have its origin in past processes of the reflective valuational type. Nevertheless, viewed in the light of its actual present character and status in experience, the æsthetic must be excluded from the sphere of values.

Thus the realms of fact and value are both real, but that of value is logically prior and so the "more real." The realm of fact is that of conditions warranting the purposes of the self; as a separate order, complete and absolute in itself, it is an abstraction that has forgotten the reason for which it was made. Reality in the logical sense is that which furthers the development of the self. The purpose that falls short of its promise in this regard is unreal—not, indeed, in the psychological sense that it never existed in imagination, but in the logical sense that it is no longer valued. Within the inclusive realm of reality the realm of fact is that of the means which serve the concrete purposes which the self accepts. The completed purpose, however, is not *means*, since still behind and beyond it there can be no other concrete valued purpose which it can serve. Nor is it an ultimate *end*, since in its character of accepted and valued end the self adheres *to* it, and it therefore cannot express the *whole* purpose of the self to whose unspecifiable fulness and increase of activity it is but a temporary probational contributor. It is rather in the nature of a formula or method of behavior to which the self ascribes reality by recognizing and accepting it as its own.

XI

SOME LOGICAL ASPECTS OF PURPOSE

INTRODUCTORY

WHENEVER and wherever it was discovered that the content of experience as given in immediate perception could be reconstructed through ideas, then and there began to emerge such questions as these: What is the significance of this reconstructive power? What is the relation between it and the immediate experience? What is the relative value of each in experience as a whole? What is their relation to truth and error? If thinking leads to truth, and thought must yet get its material from perception, how then shall the product of thought escape infection from the material? On the other hand, if truth is to be found in the immediate experience, can it here be preserved from the blighting effects of thought? For so insistent and pervasive is this activity of thought that it appears to penetrate into the sanctum of perception itself. Turning to a third possibility, if it should be found that truth and error are concerned with both — that they are products of the combined activity of perception and reflection — then just what does each do? And what in their operations marks the difference between truth and error? Or still again, if truth and error cannot be found in the operations of perception and reflection as such, then they must be located in the relation of these processes to something else. If so, what is this something else? Out of such questions as these is logic born.

There may be those who will object to some of these questions as "logical" problems — those who would limit

logic to a description of the forms and processes of reconstruction, relegating the question of the criterion of truth and error to "epistemology." This objection we must here dismiss summarily by saying that, by whatever name it is called, a treatment of the forms and processes of thought must deal with the criterion of truth and error, since these different "forms" are just those which thought assumes in attempting to reach truth under different conditions.

Certainly in the beginning the Greeks regarded their newly discovered power of thought as anything but formal. Indeed, it soon became so "substantial" that it was regarded as simply a new world of fact, of existence alongside of, or rather above, the world of perception. But Socrates hailed ideas as deliverers from the contradictions and paradoxes into which experience interpreted in terms of immediate sense-perception had fallen. In the concept Socrates found a solution for the then pressing problems of social life. The Socratic universal is not a mere empty form which thought imposes upon the world. It is something which thought creates in order that a life of social interaction and reciprocity may go on. This need not mean that the Greeks were reflectively conscious of this, but that this was the way the concept was actually used and developed by Socrates.

In attempting to formulate the relation between this new world of ideas and immediate sense-experience, Plato constructed his scheme of substantiation and participation. The Platonic doctrine of substantiation and participation is an expression of the conviction that anything so valuable as Socrates had shown ideas to be could not be merely formal or unreal. Up to the discovery of these ideas reality lay in the "substances" of perception. Hence in order to have that reality to which their worth, their value in life, entitled them, the ideas must be substantiated.

This introduction of the newly discovered ideas into the world of substances and reality wrought, of course, a change

in the conception of the latter—a change which has well-nigh dominated the entire philosophic development ever since. Let us recall that the aim of Socrates was to find something that would prevent society from going to pieces under the influence of the disintegrating conception of experience as a mere flux of given immediate content. Now, in the concepts Socrates discovered the basis for just this much-needed wholeness and stability. Moreover, the fact that unity and stability were the actual social needs of the hour led not only to the concepts which furnished them being conceived as substantial and real, but to their being regarded as a higher type of reality, as "more real" than the given, immediate experiences of perception. They were higher and more real because, just then, they answered the pressing social need.

The ideas supplied this unity because they furnished ends, purposes, to the given material of perception. The given is now given for something; for something more, too, than mere contemplation. Socrates also showed, by the most acute analysis, that the content of these ends, these purposes, was social through and through.

From the ethical standpoint this teleological character of the idea is clearly recognized. But as "real," the ideas must be stated in the metaphysical terms of substance and attribute. Here the social need is abstracted from and lost to sight. The fundamental attributes of the ideas are now a metaphysical unity and stability. Hence unity and stability, wholeness and completeness, are the very essence of reality, while multiplicity and change constitute the nature of appearance. Thus does Plato's reality become, as Windelband says, "an immaterial eleaticism which seeks true being in the ideas without troubling itself about the world of generation and occurrence which it leaves to perception and opinion."[1]

Now it is the momentum of this conception of reality as

[1] *History of Philosophy* (TUFT'S translation), p. 117.

a stable and complete system of absolute ideas, the development of which we have just roughly sketched, that is so important historically. Why this conception of reality, which apparently grew out of a particular historical situation, should have dominated philosophic theory for over two thousand years appears at first somewhat puzzling. Those who still hold and defend it will of course say that this survival is evidence of its validity. But, after all, our human world may be yet very young. It may be that "a thousand years are but as yesterday." At any rate philosophy has never been in a hurry to reconstruct conceptions which served their day and generation with such distinction as did the Platonic conception of reality. And this is true to the evolutionary instinct that experience has only its own products as material for further construction. On the other hand, the principle of evolution with equal force demands that only as *material*, not as final forms of experience, shall these products continue. It may be that philosophy has not yet taken the conception of evolution quite seriously. At all events it is certain that long after it has been found that, instead of being eternal and complete, the concept undergoes change, that it has simply the stability and wholeness demanded by a particular and concrete situation; after it has been discovered, in other words, that the stability and wholeness, instead of attaching to the content of an idea, are simply the functions of any content used as a purpose — after all this has been accepted in psychology, the conception of truth and reality which arose under an entirely different conception of the nature of thought still survives.

This change in the conception of the character of the ideas, with no corresponding change in the conception of reality, marks the divorce of thought and reality and the rise of the epistemological problem. Let us recall that in Plato the relation between the higher and ultimate

reality, as constituted by the complete and "Eternal Ideas," and the lower reality of perception, is that of archetype and ectype. Perceptions attempt to imitate and copy the ideas. Now, when the ideas are found to be changing, and when further the interpenetration of perception and conception is discovered, reality as fixed and complete must be located elsewhere. And just as in the old system it was the business of perception to imitate the "Eternal Ideas," so here it is still assumed that thought is to imitate the reality wherever now it is to be located. And as regards the matter of location, the old conception is not abandoned. The elder Plato is mighty yet. Reality must still be a completed system of fixed and eternal "things in themselves," "relations," or "noumena" of some sort which *our* ideas, now constituted by both perception and conceptional processes, are still to "imitate," "copy," "reflect," "represent," or at least "symbolize" in some fashion.

From this point on, then, thought has two functions: one, to help experience meet and reorganize into itself the results of its own past activity; the other, to reflect or represent in some sense the absolute system of reality. For a very long time the latter has continued to constitute the logical problem, the former being relegated to the realm of psychology.

But this discovery of the reconstructive function of the idea and its assignment to the jurisdiction of psychology did not leave logic where it was before, nor did it lighten its task. Logic could not shut its eyes to this "psychological" character of the idea.[1] Indeed, logic had to take the idea as psychology described it, then do the best it could with it for its purpose.

The embarrassment of logic by this reconstructive char-

[1] *Cf.* PROFESSOR J. R. ANGELL'S article, "Relations of Structural and Functional Psychology to Philosophy," *Decennial Publications of the University of Chicago*, Vol. III, pp. 10–12; also *Philosophical Review*, Vol. XII, No. 3. *Cf.* also MR. SCHILLER'S essay on "Axioms as Postulates" in *Personal Idealism*.

acter of the idea even Aristotle discovered to some extent in the relation of the Platonic perceptions to the eternal ideas. He found great difficulty in getting a flowing stream of consciousness to imitate or even symbolize an eternally fixed and completed reality. And since we have discovered, in addition, that the idea is so palpably a reconstructive activity, the difficulties have not diminished.

In such a situation it could only be a question of time until solutions of the problem should be sought by attempting to bring together these two functions of the idea. Perhaps after all the representation of objects in an absolute system is involved in the reconstruction of our experience. Or perhaps what appears as reconstructions of our experience—as desiring, struggling, deliberating, choosing, willing, as sorrows and joys, failures and triumphs—are but the machinery by which the absolute system is represented. At any rate, these two functions surely cannot be regarded as belonging to the idea as color and form belong to a stone. We should never be satisfied with such a brute dualism as this.

Without any further historical sketch of attempts at this synthesis, I desire to pass at once to a consideration of what I am sure everyone will agree must stand as one of the most brilliant and in every way notable efforts in this direction—Mr. Royce's Aberdeen lectures on "The World and the Individual." It is the purpose here to examine that part of these lectures, and it is the heart of the whole matter, in which the key to the solution of the problem of the relation between ideas and reality is sought precisely in the purposive character of the idea. This will be found especially in the "Introduction" and in the chapter on "Internal and External Meaning of Ideas." [1]

[1] From this point on this paper is an expansion of some paragraphs, pp. 11-13, in an article on "Existence, Meaning, and Reality," printed from Vol. III of the First Series of the *Decennial Publications of the University of Chicago.*

I. THE PURPOSIVE CHARACTER OF IDEAS

With his unerring sense for fundamentals, Mr. Royce begins by telling us that the first thing called for by the problem of the relation of ideas to reality is a discussion of the nature of ideas. Here Mr. Royce says he shall "be guided by certain psychological analyses of the mere contents of our consciousness, which have become prominent in recent discussion." [1]

Your intelligent ideas of things never consist of mere imagery of the thing, but always involve a consciousness of how you propose to act toward the thing of which you have ideas. . . . . Complex scientific ideas viewed as to their conscious significance are, as Professor Stout has well said, plans of action, ways of constructing the object of your scientific consciousness. . . . . By the word idea, then, as we shall use it, when, after having criticised opposing theory, we come to state in these lectures our own thesis, I shall mean in the end any state of consciousness, whether simple or complex, which when present is then and there viewed as at least a partial expression, or embodiment of a single conscious purpose. . . . . In brief, an idea in my present definition may, and in fact always does, if you please, appear to be representative of a fact existent beyond itself. But the *primary* character which makes it an idea is *not its representative character*, is not its vicarious assumption of the responsibility of standing for a being beyond itself, but is its inner character as *relatively fulfilling the purpose*, that is as presenting the partial fulfilment of the purpose which is in the consciousness of the moment wherein the idea takes place.[2] . . . . Now this purpose, just in so far as it gets a present conscious embodiment in the contents, and in the form of the complex state called the idea, constitutes what I shall hereafter call the internal meaning of the idea.[3] . . . . But ideas often seem to have a meaning; yes, as one must add, finite ideas always undertake or appear to have a meaning that is not exhausted by this conscious internal meaning presented and relatively fulfilled at the moment when the idea is there for our finite view. The melody sung, the artists' idea, the thought of your absent friend, a thought on which you love to dwell, all these not merely have their obvious

[1] P. 22. [2] Pp. 22, 23; italics mine. [3] P. 25.

internal meaning as meeting a conscious purpose by their very presence, but also they at least appear to have that other sort of meaning, that reference beyond themselves to objects, that cognitive relation to outer facts, that attempted correspondence with outer facts, which many accounts of our ideas regard as their primary inexplicable and ultimate character. I call this second, and for me still problematic, and derived aspect of the nature of ideas, their apparently external meaning.[1]

From all this it is quite evident that Mr. Royce accepts and welcomes the results of the work of modern psychology on the nature of the idea. The difficulty will come in making the connection between these accepted results and the Platonic conception of ultimate reality as stated in the following:

To be means simply to express, to embody the complete internal meaning of *a certain absolute system of ideas.* A system, moreover, which is genuinely implied in the true internal meaning or purpose of every finite idea, however fragmentary.[2]

It may be well to note here in passing that, notwithstanding the avowed subordination here of the representative to the reconstructive character of the ideas, the former becomes very important in the chapter on the relation of internal to external meaning, where the problem of truth and error is considered.

In this account of the two meanings of the idea, which I have tried to state as nearly as possible in the author's own words, there appear some conceptions of idea, of purpose, and of their relation to each other, that play an important part in the further treatment and in determining the final outcome. In the description of the internal meaning there appear to be two quite different conceptions of the relation of idea to purpose. One regards the idea as itself constituting the purpose or plan of action; the other describes the idea as "the partial fulfilment" of the purpose. (1) "Complex

[1] P. 26. [2] P. 36; italics mine.

scientific ideas, viewed as to their conscious significance, are, as Professor Stout has well said, *plans of action.*" (2) "You sing to yourself a melody; you are then and there conscious that the melody, as you hear yourself singing it, *partially fulfils* and embodies a purpose."[1] When we come to the problem of the relation between the internal and external meaning, we shall find that the idea as internal meaning comes into a third relation to purpose, viz., that of *having* the further purpose to agree or correspond to the external meaning. "Is the correspondence reached between idea and object the precise correspondence that the idea itself intended? If it is, the idea is true. . . . . Thus it is not mere agreement, but intended agreement, that constitutes truth."[2] Thus the idea is (1) the purpose, (2) the partial fulfilment of the purpose, and (3) has a further purpose—to correspond to an object in the "absolute system of ideas."

The first statement of the internal meaning as constituting the plan or purpose is, I take it, the conception of the internal meaning as an ideal construction which gives a working form, a definition to the "indefinite sort of restlessness" and blind feeling of dissatisfaction out of which the need of and demand for thought arises.[3] This accords with the scientific conception of the idea as a working hypothesis. If this interpretation of idea were steadily followed throughout, it is difficult to see how it could fail to lead to a conception of reality quite different from that described as "a certain absolute system of ideas."

The second definition of internal meaning is the one in which it is stated as the "partial expression," "embodiment," and "fulfilment" of a single conscious purpose, and in which subsequently and consequently the idea is identified with "any conscious act," for example, singing. The first part of the statement appears to say that the idea of a melody is in

[1] Pp. 22, 23; italics mine. [2] P. 307. [3] P. 327.

"partial fulfilment" of the idea regarded as the purpose to sing the melody. But, as the first statement of internal meaning implies, how can one have a purpose to sing the melody except in and through the idea? It is precisely the construction of an idea that transforms the vague "indefinite restlessness" and dissatisfaction into a purpose. The idea is the defining, the sharpening of the blind activity of mere sensation, mere want, into a plan of action.

However, Mr. Royce meets this difficulty at once by the statement that the term "idea" here not only covers the activity involved in forming the idea, *e. g.*, the idea of singing, but includes the action of singing, which fulfils this purpose. "In the same sense *any conscious act* at the moment when you perform it not merely expresses, but is, in my present sense, an idea."[1]

But this sort of an adjustment between the idea as the purpose and as the fulfilment of the purpose raises a new question. What here becomes of the distinction between immediate and mediating experience? Surely there is a pretty discernible difference between experience as a purposive idea and the experience which fulfils this purpose. To call them both "ideas" is at least confusing, and indeed it appears that it is just this confusion that obscures the fundamental difficulty in dealing, later on, with the problem of truth and error. To be sure, the very formation of the idea as the purpose, the "plan of action," is the beginning of the relief from the "indefinite restlessness." On the other hand, it defines and sharpens the dissatisfaction. When this vague unrest takes the form of a purpose to attain food or shelter, or to sing in tune, it is of course the first step toward solution. But this very definition of the dissatisfaction intensifies it. The idea as purpose, then, instead of being the fulfilment, appears to be the plan, the

[1] P. 23; italics mine.

method of fulfilment. The fulfilling experience is the further experience to which the idea points and leads.

To follow a little farther this relation between the purposive and fulfilling aspects of experience, it is of course apparent that the idea as the purpose, the "plan of action," must as a function go over into the fulfilling experience. My purpose to sing the melody must remain, in so far as the action is a conscious one, until the melody is sung. I say "as a function," for the specific content of this purpose is continuously changing. The purpose is certainly not the same in content after half the melody has been sung as it is at the beginning. This means that the purpose is being progressively fulfilled; and as part of the purpose is fulfilled each moment, so a part of the original content of the idea drops out; and when the fulfilling process of this particular purpose is complete, or is suspended—for, in Mr. Royce's view, it never is complete in human experience—that purpose then gives way to some other, perhaps one growing out of it, but still one regarded as another. A purpose realized, fulfilled, cannot persist as a purpose. We may desire to repeat the experience in memory; *i. e.*, instead of singing aloud, simply, as Mr. Royce says, "silently recall and listen to its imagined presence." But here we must remember that the memory experience, as such, is not an idea in the logical sense at all. It is an immediate experience that is fulfilling the idea of the song which constitutes the purpose to recall it, just as truly as the singing aloud fulfils the idea of singing aloud. Shouting, whistling, or "listening in memory to the silent notes" may all be equally immediate, fulfilling experiences. Doubtless the idea as purpose involves memory, as Mr. Royce says.[1] But it is a memory used as a purpose, and it is just this use of the memory material as a purpose that makes it a logical idea.

[1] *Cf.* p. 34; also p. 22.

In its content the purposive idea is just as immediate and as mechanical as any other part of experience. "Psychology explains the presence and the partial present efficacy of this purpose by the laws of motor processes, of habit, or of what is often called association."[1] Here "idea," however, simply means, as Mr. Royce takes it in his second statement, conscious content of any sort. But this is not the meaning of "idea" in the logical sense. The logical idea is a conscious content used as an organizer, as "a plan of action," to get other contents. If, for example, in the course of writing a paper one wishes to recall an abstract distinction, as the distinction dawns in consciousness, it is not an idea in the logical sense. It is just as truly an immediate fulfilling experience as is a good golf stroke. So in the mathematician's most abstruse processes, which Mr. Royce so admirably portrays, the results for which he watches "as empirically as the astronomer alone with his star" are not ideas in the logical sense; they are immediate, fulfilling experiences.[2] The distinction between the idea as the mediating experience — that is, the logical idea — and the immediate fulfilling experience is therefore not one of content, but of use.

There is a sense, however, in which the idea as a purpose can be taken as the partial fulfilment of another purpose; in the sense that any purpose is the outgrowth of activity involving previous purposes. This becomes evident when we inquire into the "indefinite restlessness" and dissatisfaction out of which the idea as purpose springs. Dissatisfaction presupposes some activity already going on in attempted ful-

[1] P. 35.

[2] This warns us that in the phrase, "a plan of action," the term "action" must be more inclusive than it is in much current discussion. It must not be limited to gymnastic performance. It must apply to any sort of activity planned for, and which, when it arrives, fulfils the plan. This, I take it, is the import of the paragraph at the top of p. 7 of PROFESSOR JAMES'S *Philosophical Conceptions and Practical Results.*

filment of some previous purpose. If one is dissatisfied with his singing, or with not singing, it is because one has already purposed to participate in the performance of a company of people which now he finds singing a certain melody, or one has rashly contracted to entertain a strenuous infant who is vociferously demanding his favorite ditty. This is only saying that any given dissatisfaction and the purpose to which it gives rise grow out of activity involving previous purposing. But this does not do away with the distinction between the idea as a purpose and the immediate fulfilling experience.

If the discussion appears at this point to be growing somewhat captious, let us pass to a consideration of the relation between internal and external meanings, where the problem of truth and error appears, and where the vital import of these distinctions becomes more obvious.

II. PURPOSE AND THE JUDGMENT

Mr. Royce begins with the traditional definition of truth, which he then proceeds to reinterpret:

> Truth is very frequently defined in terms of external meaning as *that about which we judge*. . . . . In the second place, truth has been defined as the *correspondence between our ideas and their objects*.[1] . . . . When we undertake to express the objective validity of any truth, we use judgment. These judgments, if subjectively regarded, that is, if viewed merely as processes of our own present thinking, whose objects are external to themselves, involve in all their more complex forms, combinations of ideas, devices whereby we weave already present ideas into more manifold structure, thereby enriching our internal meaning; but the act of judgment has always its other, its objective aspect. The ideas when we judge are also to possess external meaning. . . . . It is true, as Mr. Bradley has well said, that the intended subject of every judgment is reality itself. The ideas that we combine when we judge about external meanings are to have value for us as truth

[1] P. 270.

only in so far as they not only possess internal meaning, but also imitate, by their structure, what is at once other than themselves, and, in significance, something above themselves. That, at least, is the natural view of our consciousness, just in so far as, in judging, we conceive our thought as essentially other than its external object, and as destined merely to correspond thereto. Now we have by this time come to feel how hard it is to define the Reality to which our ideas are thus to conform, and about which our judgments are said to be made, so long as we thus sunder external and internal meanings.[1]

The universal judgment.— The problem is, then, to discover just the nature and ground of this relation between the internal and external meaning, between the idea and its object. This relation is established in the act of judgment. Taking first *the universal judgment*, we find here that the internal meaning has at best only a negative relation to the external meaning.

To say that all A is B is in fact merely to assert that the real world contains no objects that are A, but that fail to be of the class B. To say that no A is B is to assert that the real world contains no objects that are at once A and B.[2]

The universal judgments then "tell us indirectly what is in the realm of external meaning; but only by first telling us what is not."[3]

However, these universal judgments have after all a positive value in the realm of internal meaning; that is, as mere thought.

This negative character of the universal judgments holds true of them, as we have just said, just in so far as you sunder the external and internal meaning, and just in so far as you view the real as the beyond, and as the merely beyond. If you turn your attention once more to the realm of ideas, viewed as internal meaning, you see, indeed, that they are constantly becoming enriched in their inner life by all this process. To know by inner demonstration that $2+2=4$ and that this is necessarily so, is not yet to

[1] Pp. 270, 271. [2] P. 276. [3] P. 277.

know that the external world, taken merely as the Beyond, contains any true or finally valid variety of objects at all, any two or four objects that can be counted. . . . . On the other hand, so far as your internal meaning goes, to have experienced within that which makes you call this judgment necessary, is indeed to have observed a character about your own ideas which rightly seems to you very positive.[1]

This passage deserves especial attention. In the light of Kant, and in view of Mr. Royce's general definition of the judgment as the reference of internal to external meanings, one is puzzled to find that for the mathematician the positive value of the judgment "two and two are four" is confined to the realm of internal meaning. To be sure, Mr. Royce says that this limitation of the positive value of the universal judgment to the world of internal meaning occurs only when the external and internal meaning are sundered. But the point is: Does the mathematician or anyone else ever so sunder as to regard the judgment "two and two are four" as of positive value only as internal meaning? Indeed, in another connection Mr. Royce himself shows most clearly that mathematical results are as objective and as empirical as the astronomer's star.[2] Nor would it appear competent for anyone to say here: "Of course, they are not internal meanings *after* we come to see, through the kind offices of the epistemologist, that the internal meanings are valid of the external world." We are insisting that they are never taken by the mathematician and scientists at first as merely internal meaning whose external meaning is then to be established. Surely the mathematical judgment, or any other, does not require an epistemological midwife to effect the passage from internal to external meaning. The external meaning is there all the while in the form of the diagrams and motor tensions and images with which the mathematician works. The difficulty

[1] Pp. 280, 281. [2] See p. 256.

here again seems to be that the distinction above discussed between the idea in the logical sense, as purpose, and the immediate fulfilling experience is lost sight of. The relation between two and four is not first discovered as a merely internal meaning. It is discovered in the process of fulfilling some purpose involving the working out of this relation. So the sum of the angles of a triangle is not discovered as a mere internal meaning whose external meaning is then to be found. It is found *in working with* the triangle. It is discovered *in* the triangle. And, once more, it matters not if the triangle here is a mere memory image. In relation to the purpose, to the logical idea, it is as truly external and objective as pine sticks or chalk marks. The streams of motor, etc., images that flow spontaneously under the stimulus of the purpose are just as immediate fulfilling experiences as the manipulation of sticks or chalk lines.

The difficulty in keeping the universal judgment, as a judgment, in terms of merely internal meaning may be seen from the following:

> As to these two types of judgments, the universal and the particular, they both, as we have seen, make use of experience. The universal judgments arise in the realm where experience and idea have already fused into one whole; and this is precisely the realm of internal meanings. Here one constructs and observes the consequences of one's construction. But the construction is at once an experience *of fact and an idea.* . . . . Upon the basis of such ideal constructions one makes universal judgments. These in a fashion still to us, at this stage, mysterious, undertake to be valid of that other world — the world of external meaning.[1]

One is somewhat puzzled to know just what is meant by the fusion "of experience and idea." We must infer that it means the fusion of some aspect of experience which can be set over against idea, and this has always meant the external

[1] P. 289; italics mine.

meaning, and this interpretation seems further warranted by the statement immediately following which describes the fusion as one "of *fact* and idea." The situation then seems to be this: An internal and an external meaning, a fact and an idea, "fuse into one whole" and thus constitute that which is yet "precisely the realm of internal meanings," which aims to be valid of still another world of external meanings. And this waives the question of how experience fused into one whole can be an internal meaning, since as such it must be in opposition and reference to an external meaning; or conversely, how experience can be at once fact *and* idea and still be "fused into one whole."

Nor does the difficulty disappear when we turn to the aspects of universality and necessity. What is the significance and basis of universality and necessity as confined merely to the realm of internal meaning?

> So far as your internal meaning goes, *to have experienced within that which makes you call this judgment necessary* is, indeed, to have observed a character about your own ideas which rightly seems to you very positive.[1]

But what is it that we "experience within" which makes us call this judgment necessary? In the discussion of the relation of the universal judgment to the disjunctive judgment, through which the former is shown to get even its negative force, there is an interesting statement:

> One who inquires into a matter upon which he believes himself able to decide in universal terms, *e.g.*, in mathematics, has present to his mind, at the outset, questions such as admit of alternative answers. "A," he declares, "in case it exists at all, is either B or C." Further research shows universally, perhaps, that No A is B.

The last sentence is the statement referred to. What is meant by "further research shows universally, perhaps, that No A is B"? What kind of "research," internal or external,

[1] P. 281; italics mine.

can show this? In short, there appears to be as much difficulty with universality and necessity in the realm of internal meaning as in the reference of internal to external meaning.[1]

Instead, however, of discussing this point, Mr. Royce pursues the problem of the relation of the external and internal meaning, and finds that regarded as sundered there is no basis so far for even the negative universality and necessity in the reference of the internal meaning to the external.

> For at this point arises the ancient question, How can you know at all that your judgment is universally valid, even in this ideal and negative way, about that external realm of validity, in so far as it is external, and is merely your Other,—the Beyond? Must you not just dogmatically say that that world must agree with your negations? This judgment is indeed positive. But how do you prove it? The only answer has to be in terms which already suggest how vain is the very sundering in question. If you can predetermine, even if but thus negatively, what cannot exist in the object, the object then cannot be merely foreign to you. It must be somewhat predetermined by your Meaning.[2]

But in the universal judgment this determination, as referred to the external meaning, is only negative.

The particular judgment.—It is then through the particular judgment that the universal judgment is to get any positive value in its reference to the external meaning.

> As has been repeatedly pointed out in the discussions on recent Logic, the particular judgments—whose form is Some A is B, or Some A is not B—are the typical judgments that positively assert Being in the object viewed as external. This fact constitutes their essential contrast with the universal judgments. They undertake to cross the chasm that is said to sunder internal and external meanings; and the means by which they do so is always what is called "external experience."

[1] It is worth noting in passing that here the universal appears to be located in finite experience, while the ground of the particular is in the absolute.

[2] P. 282.

It is now high time to ask why the internal meaning seeks this external meaning. Why does it seek an object? Why does it want to cross the chasm? In other words, what is the significance of the demand for the particular judgment? In the introduction we have been told, as a matter of description, that the internal meanings do seek the external meaning, but why do they? We have also been told that universal judgments "develop and enrich the realm of internal meaning." Why, then, should there be a demand for the external meaning, for a further object? The answer is:

> We have our internal meanings. We develop them in inner experience. There they get presented as something of universal value, *but always in fragments.* They, therefore, so far dissatisfy. We conceive of the Other wherein these meanings shall get some sort of final fulfilment.[1]

It is, then, the incomplete and fragmentary character of the internal meaning that demands the particular judgment. The particular judgment is to further complete and determine the incomplete and indeterminate internal meaning. And yet no sooner is this particular judgment made than we are told that "it is a form at once positive, and very unsatisfactorily indeterminate." Again:[2]

> The judgments of experience, the particular judgments, express a positive but still imperfect determination of internal meaning through external experience. The limit or goal of this process would be an individual judgment wherein the will expressed its own final determination.[3]

Apparently, then, the particular judgment to which the internal meaning appeals for completion and determination only succeeds in increasing the fragmentary and indeterminate character.

This brings us to another "previous question." Just

[1] P. 284; italics mine. [2] P. 283. [3] P. 332.

what are we to understand by this "fragmentary" and "indeterminate" character of the internal meaning? In what sense, with reference to what, is it incomplete and fragmentary? Later we shall be told that it is with reference to "its own final and completely individual expression." This is to be reached in the individual judgment. And if we ask what is meant by this final, complete, and individual expression — which, by the way, no human being can experience — we read, wondering all the while how it can be known, that it is simply "the expression that seeks no other," that "is satisfied," that "is conclusive of the search for perfection."[1] Waiving for the present questions concerning the basis of this satisfaction and perfection, all this leaves unanswered our query concerning the other end of the matter, viz., the meaning and criterion of the fragmentary and indeterminate character of these internal meanings.

If we here return to the first definition of internal meaning of the idea as a purpose in the sense of "a plan of action," such as "singing in tune," or getting the properties of a geometrical figure, it does not seem difficult to find a basis and meaning for this fragmentary and indeterminate character. First we may note in a general way that it is of the very essence of a plan or purpose to lead on to a fulfilling experience such as singing in tune, or reaching a mathematical equation. But here this fulfilling experience to which the plan points is not a mere working out of detail inside the plan itself, although, indeed, this does take place. If this were all the fulfilling experience meant, it is difficult to see how we should escape subjective idealism.[2] We start with a relatively indeterminate idea and end with a more determinate *idea*, though, indeed, there is yet no criterion for this increased determination. To be sure, the idea as a

[1] P. 339.

[2] This ghost of subjectivism haunts the entire part of the essay in which the final fulfilment of finite ideas is found in "a certain absolute system of ideas."

plan of action, as has already been stated, does undergo change and does become, if you please, more definite and complete as a plan; but this does not constitute its fulfilment. Its fulfilment surely is to be found in the immediate experiences of singing, etc., to which the idea points and leads.

The fragmentary and incomplete character of the internal meaning as a plan of action does not, then, after all, so much describe the plan itself as it does the general condition of experience out of which the idea arises. Experience takes on the form of a plan, of an idea, precisely because it has fallen apart, has become "fragmentary." It is just the business of the internal meaning, as Mr. Royce so well shows, to form a plan, an ideal, an hypothetical synthesis that shall stimulate an activity, which shall satisfactorily heal the breach. "Fragmentary" is a quality, then, that belongs, not to the idea in itself considered, but to the general condition of experience, of which the idea as a plan is an expression.

If, now, the fragmentary character of the internal meaning is determined simply with relation to the fulfilling experiences, such as singing in tune, adjustments of geometrical figures, etc., to which it points and leads, it seems as if the completion of the internal meaning must be defined in the same terms. And this would appear to open a pretty straight path to the redefinition of truth and error.

III. THE CRITERION OF TRUTH AND ERROR

At the outset, truth was defined as the "correspondence" or "agreement" of an idea with its object. But we have seen that correspondence or agreement with an object means the completion and determination of the idea itself, and since the idea is here a specific "plan of action," it would seem that the "true" idea would be the one that can complete itself by stimulating a satisfying activity. The

false idea would be one that cannot complete itself in a satisfying activity, such as singing in tune, constructing a mathematical equation, etc., and just this solution is very clearly expounded by our author. In the case of mathematical inquiry,

> In just so far as we *pause satisfied* we observe that there "is no other" mathematical fact to be sought *in the direction of the particular inquiry in hand.* Satisfaction of purpose by means of *presented fact* and such determinate satisfaction as sends us to no other experience for further light and fulfillment, precisely this outcome is itself the Other that is sought when we begin our inquiry.[1]

So "when other facts of experience are sought," if I watch for stars or for a chemical precipitate, or for a turn in the stock market, or in the sickness of a friend, my ideas are true when they are satisfied with "the presented facts." Again,

> It follows that the finally determinate form of the object of any finite idea is that form which the idea itself would assume whenever it became individuated, or in other words, became a completely determined idea, an idea or will fulfilled by a wholly adequate empirical content, for which no other content need be substituted or from the point of view of the satisfied idea, could be substituted.[2]

In such passages as these it seems clear that the test of the truth of an idea is its power to bring us to the point where we "pause satisfied," where "no other content need be substituted," etc. Nor in such passages does there seem to be any doubt of reaching satisfaction in particular cases. Here, it appears, we *may* sing in tune, we *may* get the desired precipitate, and possibly even interpret the stock market correctly. Of course, the discord, the hunger, the loss, will come again; but so will new ideas, new truths. "Man thinks in order to get control of his world and thereby of himself."[3] Then the control actually gained must measure the value, the truth of his thought. Do you wish to

[1] P. 330; italics mine. [2] P. 337. [3] P. 286.

sing in tune, "then your musical ideas are false if they lead you to strike what are then called false notes."[1]

It should also be noticed that here this desired determination does not consist in a further determination of the mere idea as such. It is found in "the presented fact," in the immediate activity of singing, of getting precipitates, etc. As has already been pointed out, it is only by using the term "idea" for both the purpose and the fulfilling act of singing that this "pause of satisfaction" can be ascribed to the further determination of the idea. As such, as also before remarked, the sort of determination that the idea here gets means its termination, its disappearance in the immediate experiences of singing, etc., to which it leads. The "indefinite restlessness" of hunger and cold would scarcely be satisfied by getting more determinate and specific *ideas* only of food and shelter. The satisfaction comes when the ideas are "realized," when the "plans" are swallowed up in fulfilment.

But in all this nothing has been said about "the certain absolute system of ideas," nor does there appear to be here any demand for it. To be sure, in the passages just considered, experience has been found to become "fragmentary," but it has also been found capable of healing, of wholing itself, not of course into any "final whole," but into the unity of "satisfaction" as regards "the particular inquiry in hand." There is of course failure as well, but this also is not final. It means simply that we must look farther for the "pause of satisfaction," that we must construct another idea, another "plan of action."

But, after having shown that the idea as a plan of action may lead to satisfaction in the particular case, and that its success or failure so to do is one measure of its truth or falsity, we are now suddenly aroused to the fact that after

[1] P. 307.

all thought does not lead us to the completed "absolute system of ideas," to a final stage of eternal unbroken satisfaction.

> But never in our human process of experience do we reach that determination. It is for us the object of love and of hope, of desire and of will, of faith and of work, but never of present finding.[1]

If at this point one asks: Whence this absolute system of ideas? Why have we to reckon with it at all? there appears to be little that is satisfying. Indeed, it seems difficult to get rid of the impression that this "certain absolute system of ideas" is on our hands as a philosophical heirloom from the time of Plato, so hallowed by time and so established by centuries of acceptance that we have ceased to ask for its credentials. To ground it in the "essentially fragmentary character of human experience" appears to be a *petitio*, for experience does not appear "essentially fragmentary" in this sense until after the absolute system has been posited.

And this brings to notice that at this point both the fragmentary and unitary characters of experience take on new meaning. So far this fragmentary character has been defined with reference to "the particular inquiry in hand." Now, since the distinction between absolute and human experience has emerged, the fragmentary character becomes an absolute quality of the latter in contrast with the former. So, *mutatis mutandis*, of unity. Up to this point unity, wholeness, has been possible within human experience in the case of particular problems, such as singing in tune, etc. But with the appearance of the absolute system of ideas, wholeness is now the exclusive quality of the latter, as incompleteness is of human experience, though of course the *working* unity, the unity resulting in "pauses of satisfaction," must still remain in the latter.

[1] P. 297.

The problem now is to somehow work the absolute system of ideas into connection with the conception of the idea as a purpose, as a concrete plan of action. Here is where the third conception of the relation between idea and purpose, described at the beginning, comes into play — the conception in which the idea, instead of being the purpose, or the fulfilment of a purpose, *has* the purpose to correspond with, or represent "its own final and completely individual expression," contained in the absolute system. From the previous standpoint the idea's "own final and completely individual expression" has been found in the fulfilling experiences of singing in tune, getting mathematical equations, chemical precipitates, etc. Here this complete individual experience can never be found in finite, human experience, but must be sought in the absolute system — and this can be only "the object of love and hope, of desire and will, never of present finding."

Notwithstanding the many previous protestations that the purposive function of the idea is its "primary" and "most essential" character, we are here forced to fall back upon correspondence — representation as the primary, the essential, and indeed, it appears at times, as the sole function. For in the attempt to bring these two functions together the purposive function is swallowed up in the representative. The idea still is, or has a purpose, a "plan of action," but this purpose, this plan, is now nothing but to represent and correspond with its own final and completed form in the absolute system. By this simple *coup* is the purposive function of the idea reduced at once to the representative. Nor is it pertinent to urge at this point that every purpose involves representation, that the plan must be some sort of an image or scheme which symbolizes and stimulates the thing to be done. This no one would question, but now the sole "thing to be done" apparently is to perfect this representa-

tion of the complete and individual form in the absolute system.[1]

Once more, an array of passages could be marshaled from almost every page refuting any such interpretation as this, but they would be passages expounding the part played by the idea in such concrete experiences as singing, measuring, etc., not in representing an absolute system of ideas. Even as regards the latter one might urge that, by insisting on the active character of the idea, we could after all regard this absolute system as a life of will after the fashion of our own, were it not at once described as "the complete embodiment," "the final fulfilment," of finite ideas. A life consisting of mere fulfilment seems a baffling paradox. And its timeless character only adds to the difficulty. Moreover, if we regard the system as constituted by such concrete activities as measuring and singing, etc., while we have saved will, we shall now have to fall back upon our first conception of truth as found in the idea which unifies the fragmentary condition of experience as related to specific problems, not fragmentary as related to an absolute system.

This brings us to the final and crucial point of the discussion, the part which purpose plays in the determination of *truth* and *error* from the standpoint of "the absolute system of ideas." When is this purpose of the idea to correspond with its absolute, final, and completed form fulfilled,

[1] This reduction of the purposive to the representative function carries with it an interesting implication concerning the whole character and relationship of thought and will. From beginning to end, on almost every page, Mr. Royce insists upon the idea as an expression of will. At the outset we read: "When we try to define the idea in itself, as a conscious fact, our best means is to lay stress upon the sort of will or active meaning which any idea involves for the mind that forms the idea" (p. 22). Again: "The idea is a will seeking its own determination. It is nothing else" (p. 332)—and so on throughout the lectures. And we have already seen how consistently this is worked out in the analysis of concrete acts, such as singing, etc. But now, as related to the absolute system, the will, as embodied in the idea, is to find its final determination in approximating the certain absolute system of ideas. This would seem to make will but little more than the mere form of representation itself. The idea is a will, but in its relation to truth its will is "to correspond even in its vagueness to its own final and completely individual expression."

or partially fulfilled? And here at the very outset is a difficulty. We have read repeatedly that the idea is itself "the partial fulfilment of a purpose." It is now to seek an object which shall increase this degree of fulfilment, but still this fulfilment shall be incomplete. And when we come to consider error, it too will be found to consist in a partial fulfilment. So it appears that there are three stages of "partial fulfilment" to be discriminated, one belonging to the idea itself, another to finite truth, and still another to error.

Returning to the problem, from this point on we find the two standpoints, that of the specific situation and that of the absolute system, so closely interwoven and entangled that they are followed with great difficulty. We have already seen that the idea seeks correspondence with its object, because it is "fragmentary," "incomplete," "indetermined." And there we found that this indeterminate and fragmentary character belonged to the idea as a purpose, a plan of seeking relief from some sort of "restlessness" and "dissatisfaction," such as singing out of tune, etc. Here it is the incompleteness of an imperfect representation of its object in the absolute system that is the *motif*, and how it is to effect an improvement in its imperfect condition is now the problem. Here again the appeal is to purpose. Whatever may constitute the absolute system, one thing is assured: nothing in it can be an object except as the finite idea "intends it," purposes it, to be its object. Again must we ask: On what basis is this object in the absolute system selected at all? In general the answer is: On the basis of a need of "further determination;" but when we further analyze this, we find it means on the basis of a specific want or need, such as food, shelter, measuring, singing, etc. The basis of the selection, then, is entirely on the side of the concrete, finite situation.

Here, too, we might ask: Whence the confidence that there will be found something in the absolute system that will fulfil the purpose generated on the side of the finite? Must we not here fall back on something like a pre-established harmony? To this our author would say: "Yea, verily. The fact that the absolute system responds to the finite needs does precisely show that the finite and the absolute cannot be sundered." But when we try to state *how* the purpose generated on the side of the finite can be met by the absolute system, the account again seems to run so much in terms of the finite experience that to call it a system of "final," "completed," and "fulfilled" ideas does not seem accurate. We must note here, too, the shifting in the sense of "purpose." The idea selects its object on the basis of the material needed to relieve the unrest and dissatisfaction of singing out of tune, etc. But now it is to be satisfied by increasing the extent of its representation of its object in the absolute system.

And now, finally, what shall mark the attainment of this purpose of the idea to correspond and represent "its own completed form"? When is the correspondence and representation true? Simply at the point where "we pause satisfied," where "no other content need be substituted, or from the point of view of the satisfied idea could be substituted." That is all; there is no other answer. There are other statements, but they all come to the same thing. For instance:

> It is true—this instant's idea—if, in its own measure, and on its own plan, it corresponds, even in its vagueness, to its own final and completely individual expression.[1]

But the moment we ask what this "final and individual expression" is, and what is meant by "in its own measure,"

[1] P. 339.

and "on its own plan," we are thrown back at once upon the preceding statement. The next sentence following the passage just quoted does indeed define this "individual expression." "Its expression would be the very life of fulfilment of purpose which this present idea already fragmentarily begins, as it were, to express." But how can we know that the expression is "fragmentary" unless we have some experience of wholeness?

And here perhaps is the place to say, what has been implied all along, that this absolutely "fragmentary" character of human experience is an abstraction of the relatively disintegrated condition into which experience temporarily falls, which abstraction is then reinstated as a fixed quality, overlooking the fact that experience becomes fragmentary only that it may again become whole. The absolute system, the final fulfilment, is in the same case. It too is but the hypostatized abstraction of the function of becoming whole, of wholing and fulfilling, which manifests itself in the "pauses of satisfaction."

"But," Mr. Royce would say, "the wholeness of the particular instance is after all not a true and perfect wholeness, because we can always think of the fulfilling experience as possibly different, as having a possibly different embodiment." But this implies also a different purpose. Moreover, it abstracts the purpose from the specific conditions under which the purpose develops. Thus in singing in tune one doubtless could easily imagine himself singing another tune, on another occasion, in another key, in a clear tenor instead of a cracked bass, etc. But if on *this* occasion, in *this* song, and with *this* cracked bass voice one, accepting all these conditions, does, with malice aforethought, purpose to strike the tune, and happily succeeds, why, for that purpose formed under the known and accepted conditions, is not the accomplishment final and absolute? Nor is the

case any different, so far as I can see, in mathematical experience. To quote again:

> You think of numbers, and accordingly count one, two, three. Your idea of these numbers is abstract, a mere generality. Why? Because there could be other cases of counting, and other numbers counted than the present counting process shows you, and why so? Because your purpose in counting is not wholly fulfilled by the numbers now counted.[1]

I confess I cannot see here in what respect the purpose is not fulfilled. Doubtless there could be "other cases of counting," and "other numbers," but these may not be included in my present purpose, which is simply to count here and now. In this passage the purpose is not very fully defined. One's counting is usually for something, if for nothing more than merely to illustrate the process. In this latter case one's purpose would be completely fulfilled by just the numbers used when he should "pause satisfied" with the illustration. Or, if I wish to show the properties of numbers, then the discovery that there can always be more of them fulfils my purpose, since this endless progression is one of the properties. Or yet again, if one should suddenly become enamored of the process of counting, and forthwith should purpose to devote the rest of his days to it, it would still be fortunate that there were always other numbers to be counted. In other words, the idea as a purpose is formed with reference to, and out of, specific conditions. In the last analysis the problem always is: What is to be done here and now with the actual material at hand, under the present conditions? As the purpose is determined by these specific conditions, so is the fulfilment. To say that the fulfilment might be different is virtually to say that the purpose might have been different, or indeed that the universe might have been different.

[1] P. 338.

This necessity of falling back upon the character of the idea as a purpose in the sense of the specific "plan of action" comes into still bolder relief in the consideration of error from the standpoint of "the absolute system of ideas." As already mentioned, the initial and persistent problem here is to distinguish at all between truth and error in our experience from this standpoint. All our efforts at representing the absolute system must fall short. What can we mean, then, by calling some of our ideas true and others false? The definition of error is as follows:

> An error is an error about a specific object, only in case the purpose, imperfectly defined by the vague idea at the instant when the error is made, is better defined, is in fact, better fulfilled by an object whose determinate character in some wise, although never absolutely, opposes the fragmentary efforts first made to define them.[1]

But in relation to the absolute system the later part of this statement holds of all our ideas. There always is the absolute object which would "better define" and "better fulfil" our purposes. Hence it is only in reference to the "specific" instances of singing, measuring, etc., that a basis for the distinction can be found. Here our plan is not true so long as its mission of relieving the specific unrest and dissatisfaction, the specific discord or hunger, is unfulfilled.

The only criterion, then, which we have been able to find for the fulfilment of the purpose, for the truth of the idea as representing an object in the absolute system, is the sense of wholeness, the "pause of satisfaction," which we experience in realizing such specific purposes as "singing in tune." And if it be said again: "Precisely so; this only shows how intimate is the relation between our experience and the absolute system of ideas;" then must it also be said once more, either that the absolute system can be nothing more than an

[1] P. 335.

abstraction of the element of wholeness or wholing in our experience, or that thus far the relation appears to rest upon sheer assumption.

Again, it may be insisted, as suggested at the outset of this discussion, that the idea can well have two purposes: one to help constitute and solve the specific problems of daily life; the other to represent the absolute system. Very well, we must then make out a case for the latter. If the purposes are to be different, the purpose to represent the Absolute should have a criterion of its own. This we have not been able to find. On the contrary, whenever pushed to the point of stating a criterion for the representation of the absolute system, we have had to appeal, in every case, to the fulfilment of a specific finite purpose. And even if this purpose to represent the absolute system had some apparent standard of its own, we should not be content to leave the matter so. We should scarcely be satisfied to observe as a mere matter of fact that the idea has a reconstructive function, and *also* a representative function. Such a brute dualism would be intolerable.

IV. SUMMARY AND CONCLUSIONS

In the end, the outcome of the endeavor to establish a connection between the relation of the idea to human experience and its relation to the absolute system does not appear satisfying. The idea is left either with two independent purposes — one to reconstruct finite experience, the other to represent and symbolize the absolute system — or one of these purposes is merged in the other. When the attempt is made from the standpoint of the absolute system, the reconstructive purpose is swallowed up in the representative. When, on the other hand, the need for a basis of distinction between truth and error "here on this bank and shoal of time" is felt, the representative disappears in the

reconstructive function. Nowhere are we able to discover a true unification. To be sure, we have been told again and again that the representation of the absolute object, if only we could accomplish it, would be "the final fulfilment," "completion," and "realization" of the human, finite purpose. But besides a confessed impotency at the very start, this involves, as we have seen, either a sudden transformation of the specific purpose of singing in tune, etc., into that of representing the absolute system, or a sheer assumption that the representation of the absolute object does somehow help in the realization of the specific finite purpose. Nowhere is there any account of *how* this help would be given.

And this suggests that if the analysis of the idea as purpose, given at the outset of Mr. Royce's lecture, had been developed further, if the conditions and origin of purpose had been examined, it is difficult to see how this discrepancy could have escaped disclosure. Mr. Royce starts his account by simply accepting from psychology a general description of the purposive character of the idea. Even in the more detailed passages on purpose we have nothing but descriptions of purpose after it is formed. Nothing is said of the origin of this purposiveness. The purposive character of experience is of course very manifest, but what is the significance of this purposing in experience as a whole? What is the source and the material of the purposes?

It is this uncritical acceptance of the purposive quality of the idea that obscures the irrelevancy of its relation to the absolute system. If the idea must merely be or have a purpose, then it may as well be that of representing the absolute system as any other. Of course, there are troublesome questions as to how our finite ideas ever got *such* a purpose; but, after all, if it is simply a matter of having any sort of a purpose, representing the absolute system may answer as well as anything. But when now we come to deal

with the problem of fulfilment, with the question of truth and error, we have to reckon with this neglect of the source of this purposiveness.

It is this unanalyzed ground of the purpose that makes the matter of fulfilment so ambiguous. Such an analysis, we believe, would have shown that the conditions out of which the idea as a purpose arises determine also the sort of fulfilment possible. There are, indeed, one or two very general, but very significant, statements in this direction, if they were only followed up. For instance:

> In doing what we often call "making up our minds" we pass from a vague to a definite state of will and of resolution. In such cases we begin with perhaps a very indefinite sort of restlessness which arouses the question: "What is it that I want, what do I desire, what is my real purpose?"

In other words, what does this restlessness mean? What is the matter? What is to be done?

Purpose is born, then, out of restlessness and dissatisfaction. But whence comes this restlessness and dissatisfaction? Surely we cannot at this point charge it to a discrepancy between our finite idea and the absolute object, since it is just this restlessness that is giving birth to the purposive idea. One thing, at any rate, appears pretty certain: this "indefinite restlessness" presupposes some sort of activity already going on. The restlessness is not generated in a vacuum. But why should this activity get into a condition to be described as "indefinite restlessness" and dissatisfaction?

Repugnant as it will be to many to have psycho-physical, to say nothing of biological, doctrines introduced into a logical discussion, I confess that, at this point facing the issue squarely, I see no other way. And it appears to me that just at this point it is the fear of phenomenalistic giants that has kept logic wandering so many years in the wilderness.

What, then, in this action already going on is responsible

for this restlessness? First let us note that "indefinite restlessness" and "dissatisfaction" are terms descriptive of what Mr. James calls "the first thing in the way of consciousness." This assumes consciousness as a factor in activity. So that our question now becomes: What is the significance of this factor of restless, dissatisfied consciousness in activity? Now, there appears no way of getting at the part which consciousness plays different from that of discovering the function of anything else. And this way is simply that of observing, as best we may, the conditions under which consciousness operates, and what it does. Here the biologist and psychologist with one voice inform us that this indefinite restlessness which marks the point of the operation of consciousness arises where, in a co-ordinated system of activities, there develop out of the continuation of the activity itself new conditions calling for a readjustment and reconstruction of the activity, if it is to go on. Consciousness then appears to be the function which makes possible the reorganization of the results of a process back into the process itself, thus constituting and preserving the continuity of activity. So interpreted, consciousness appears to be an essential element in the conception of a self-sustaining activity. This "indefinite restlessness," in which consciousness begins, marks, then, the operation of the function of reconstruction without which activity would utterly break down.

Precisely because, then, the idea "as a plan" is projected and constructed in response to this restlessness must its fulfilment be relevant to it. It is when the idea as a purpose, a plan, born out of this matrix of restlessness, begins to aspire to the absolute system, and attempts to ignore or repudiate its lowly antecedents, that the difficulties concerning fulfilment begin. They are the difficulties that beset every ambition which aspires to things foreign to its inherited powers and equipment.

A detailed account at this point of the construction and fulfilment of the idea as "a plan of action" would contain a consecutive reinterpretation of Mr. Royce's principal rubrics. Such an account the limits of this paper forbid. We shall have to be content with pointing out in a general way a few instances by way of illustration.

In the first place, it is in this matrix of indefinite restlessness out of which the idea is born that the "fragmentary character of experience," of which Mr. Royce is so keenly conscious, appears. But, once more, this fragmentary character is discernible only by contrast with the wholeness on both sides of the fragments; the wholeness that precedes the restlessness, and the new "pause of satisfaction" toward which it points. Nor must we forget that the habit matrix, out of the disintegration of which the restlessness is immediately born, does not exist as some metaphysical ultimate out of which thought as such has evolved. Back of it is some previous purpose in whose service habit was enlisted. On the other hand, this disintegration means that the old purpose, the old plan, must be reconstructed; that it, along with the disintegrated habit, becomes the material for a new plan, a new wholing of experience.

In the next place, the construction of this new plan of action does involve "re-presentation." The first step in the transition from the condition of "indefinite restlessness" toward a "plan" is the diagnosis, the definition of the restlessness. This involves the re-presentation in consciousness of the activities, out of which the restlessness has arisen. This re-presentation is also the beginning of the reconstruction. The diagnosis of the singing activity as being "out of tune" is the negative side of beginning to sing in tune. It is now a commonplace of psychology that all representation is reconstruction. And this is where Mr. Royce's emphasis of the symbolic, the algebraic, as against the copy type of rep-

resentation, has its application. All we want here is some sort of an image—visual, auditory, motor, it matters not—that shall serve to focus attention upon the singing activities until they are reconstructed sufficiently to bring us to the "pause of satisfaction."[1] But nowhere in all this is there any reference to the idea's object in the absolute system. Nor does there appear to be any call or place for such reference. The representation here is a part of the very process of forming the plan of further reconstruction out of the materials of the specific situation. Representation is not the plan's own end and aim. This is to stimulate a new set of activities that shall lead out of the present state of unrest and dissatisfaction.

It is also true, as already mentioned, that in the process of fulfilling the plan, of realizing the idea, further determination and specification is produced in the plan itself. The idea as a plan is certainly not formed all at once. Nor does it reach and maintain a fixed content. No purpose is ever realized in its original content. But this does not mean that its realization is, therefore, "partial," "incomplete," or "fragmentary." It is a part of its business to change. The purpose is not there for its own sake. The purpose is there as a *means* to the reorganization and reconstruction of experience. It exists, as Mr. Royce says, as an instrument, "as a tool" for "introducing control into experience." And as, in the process of use, a tool always undergoes modification, so here, as an instrument for reconstructing habit, the plan, too, undergoes reconstruction. Indeed, as regards its content, it is itself, as Mr. Royce says, as much a habit, as much "the product of association," as any part of experience. The purposing function, the purposing activity, remains; its content is constantly shifting.

Here, too, is where "the submission of the idea to the

[1] *Cf.* MR. GORE'S paper, above.

object" takes place. Only, here, it is not a submission to an object already constituted as it is in Mr. Royce's conception of the absolute system. The idea as an hypothetical plan of action, as a trial construction, must be tested by the activities it is attempting to reconstruct. That is to say, at this point the question is: Does the plan apply to the activities actually involved in the unrest? Has it diagnosed the case properly, and is it therefore one in and through which these activities can operate and come to unity again? The "submission" here is the submission of the purpose, the end, to the material out of which it is formed, and with which it must work. But again this material to which the idea submits itself is anything but finally fixed and "complete" in form. On the contrary, as we have seen, it is just the fragmentary and incomplete condition of this material that calls for the idea. Yet the idea as a plan must be true to its mission, and to this material, and in this sense must submit itself to whatever modifications and reconstruction the material "dictates" as necessary in order that it may function in and through the plan.[1]

On the other hand—and this is the point to which Mr. Royce gives most emphasis—it is equally apparent that "the idea must determine its object." On this all philosophy, from Plato down, which approaches reality "from the side of ideas" is at stake. And this does not appear impossible if, again, the object is not already and eternally fixed and complete. If the object is one constructed out of the very mass of habit material which the idea is reconstructing, and if "determination" means not copying, but construction, then, indeed, must the idea "determine its object." Just for that

[1] *Cf.* BALDWIN'S *Development and Evolution*, pp. 250, 251, on the necessity of the submission of the "new experience" to the test of its ability to utilize habit. Interpreted broadly, habit might here mean the whole mechanical side, including organism *and* environment, and so include Mr. Baldwin's second or "extra-organic" test.

does it have its being. That is its sole mission. Here the determination of the object by the idea is not a mere abstract postulate; it is not based upon a general consideration of the disastrous consequences to our logical and ethical assumptions, if it were not so determined. Here not only the general necessity for it, but the *modus operandi* of this determination, is apparent. But, at the risk of tedious iteration, must it again be said that for the determination of the completed and perfected object in the absolute system not only is there nowhere any *modus* to be found, but, even if there were, it is difficult to see what it would have to do with the kind of determination demanded by such a specific sort of unrest as "singing out of tune," etc. The process of submission is thus a reciprocal one. Neither in the object nor in the idea is there a fixed scheme or order *to* which the other must submit and conform. And this is simply the logical commonplace that submission cannot be a one-sided affair, that determination must be reciprocal.

This brings us to what might as well have been our introductory as our concluding observation. It has just been said that the determination of the object by the idea is a vital matter in any philosophy which approaches reality "from the side of ideas." Such a way of approach must assert "the primacy of the world of ideas over the world as a fact."[1] Mr. Royce thus further states the case:

> I am one of those who hold that when you ask what is an idea, and how can ideas stand in any true relation to reality, you attack the world knot in the way that promises most for the untying of its meshes. This way is of course very ancient. It is the way of Plato. . . . . It is in a different sense the way of Kant. If you view philosophy in this fashion, you subordinate the study of the world as fact to a reflection upon the world as idea. Begin by accepting upon faith and tradition the mere brute reality of the world as fact, and there you are sunk deep in an ocean of mystery.

[1] P. 19.

. . . . The world of fact surprises you with all sorts of strange contrasts. . . . . It baffles you with caprices like a charming and yet hopelessly wayward child, or like a bad fairy. The world of fact daily announces itself to you as a defiant mystery.[1]

Here we have concisely stated at the outset of the lectures the position which we have seen to be fraught with so many difficulties: the position, namely, which accepts to start with the opposition of the world as idea and the world as fact, as something given, instead of something to be accounted for; and which assumes that this opposition stands in the way of reaching reality, whereas it possibly may be of the very essence of reality. To be sure, the above statement of this opposition between the world as fact and as idea is but the expository starting-point. And it is true that the rest of the argument is occupied in the attempt to close this breach. But, as we have seen, except where the idea is expounded as a specific purpose, arising out of a specific experience of unrest, such as singing out of tune, etc.—except in this case, the breach is taken as found and the attempt to heal it is made by working forward from the opposition as given instead of back to its source. This opposition, of course, has its forward goal, but the difficulty is to find it without an exploration of its source. It is back in that matrix out of which the opposition has arisen that the line of direction to the goal is to be found.

Moreover, in starting from this opposition of fact and idea as given, the only method of quelling it seems to be either that of reducing one side to terms of the other, or of appealing to some new, and therefore external unifying, agency. But if the factors in the opposition are found, not one in submission *to* the other, nor having the "primacy" *over* the other, but as co-ordinate and mutually determining functions, developed from a common matrix and co-operating

[1] Pp. 17, 18.

in the work of reconstructing experience, some of the difficulties involved in the alternative methods just mentioned appear to drop out.[1]

The point may be clearer if we recur to the passage and ask just what is meant by "the defiantly mysterious," "baffling," and "capricious" character of the world as fact—as "brute reality." First, if by the world as "fact," as "brute reality," we mean experience so brute that it is not yet "lighted up with ideas," it is difficult to see how it could be mysterious or capricious, since mystery and caprice appear only when experience ceases to be taken merely as it comes and an inquiry for connections and meanings has begun. That is to say, there can be neither mystery nor caprice except in relation to some sort of order. And order is always a matter of ideas. But it is sufficient to submit Mr. Royce's own statement on this point:

> We all of us from moment to moment have experience. This experience comes to us in part as brute fact; light and shade, sound and silence, pain and grief and joy. . . . . These given facts flow by; and were they all, our world would be too much of a blind problem for us even to be puzzled by its meaningless presence.[2]

If next we take the world of fact as in contrast and co-ordinate with the world of ideas, mystery and caprice here, certainly, are not all on the side of the fact. Here, again, must they be functions of the relation between fact and idea. We have seen that without thought there is neither mystery nor caprice. The idea then cannot take part in the production of mystery and caprice, and forthwith deny its parenthood. Of course, mystery and caprice are not the final fruits of this co-ordinate opposition of fact and idea. They are but the *first* fruits—the relatively unorganized embryonic mass which through the further activities of the parent functions shall develop into the symmetry of truth and law.

[1] See, above, PROFESSOR DEWEY'S Study III, pp. 49 ff. [2] P. 55.

There appears then no ultimate "primacy" of either idea or fact over the other. Nor does either appear as a better way of approach *to* reality than the other. It is only when we say: "Lo! here in the idea," *or* "Lo! there in the fact is reality," that we find it "imperfect," "incomplete," and "fragmentary," and must straightway "look for another." But surely not in "a certain absolute system of ideas," which is "the object of love and hope, of desire and will, of faith and work, but never of present finding," shall we seek it. Rather precisely in the loving and hoping, desiring and willing, believing and working, shall we find that reality in which and for which both the "World as fact" and the "World as idea" have their being.

INDEX

ABSOLUTE: as constituting reality, 348; as related to truth and error, 363 ff.; as a hypostatized abstraction, 369.

ABSOLUTE SELF, 330.

ACCESSORY: thought as, 58 ff.

ACTIVITY: as social, 74; thought as, 78; interrupted, and judgment, 154; and hypothesis, 170; as sensori-motor, 193, 200; (see Function, Reconstruction).

ÆSTHETIC EXPERIENCE: appreciative rather than reflective, 255; not a form of valuation, 339, 340.

ALTERNATIVES: in judgment, 155; (see Disjunction).

ANALOGY, 171, 172, 175; in relation to habit, 176.

ANAXAGORAS: in relation to the One and the Many, 219; his νοῦς, 220, 221.

ANAXIMANDER: and the infinite, 209; his process of segregation, 214, 215.

ANAXIMENES: his ἀρχή air, 209; his scheme of rarefaction and condensation, 209, 213, 215, 224.

ANGELL, J. R., 14 note, 345 note.

ANIMISM, 49 note.

ANTECEDENTS OF THOUGHT (see Stimulus).

APPLIED LOGIC: Lotze's definition, 6.

APPRECIATION: distinguished from reflection, 255, 339; not to be identified with valuation, 320–24, 338.

Ἀρχή: meaning of search for, 211 ff.

ASSOCIATION OF IDEAS: refers to meanings, 33, 34; connection with thought, 80; doctrine of: analogous to subjectivism in ethics, 261; presupposes a mechanical metaphysics, 330, 331 note.

ATOMISTS: treatment of the One and the Many, 221.

AUSTRIAN ECONOMISTS, 307, 333.

AUTHORITY AND CUSTOM: logic of attitude of obedience to, 286; social conditions compatible with dominance of, 286; failure of, as moral control, 286.

BACON: extreme empirical position, 156 ff.; view of induction, 157, 158.

"BAD": practical significance of, as moral predicate, 259; relation to "wrong," 335.

BALDWIN, J. M., 257 note, 378 note.

BECOMING: as relative, 206.

"BEGRÜNDUNG" AND "BESTÄTIGUNG": Wundt's distinction of, 179; criticised, 181, 182.

BIOLOGY: view of sensation, 58; use of, in logic, 374, 375.

BOSANQUET, B., 59 note, 147, 189, 190, 191, 300; (see Study V).

BRADLEY, F. H., 47 note, 54 note, 90 ff., 147, 189, 190, 191, 192, 194, 299 note 2, 331 note, 332 note, 353.

BRENTANO, 250 note.

BUTLER, J., 277.

CERTAIN, THE: relation to tension, 50, 51; as datum, 57.

COEFFICIENTS OF REALITY, PERCEPTION, AND RECOGNITION: defined, 263–7; present in economic and ethical experience, 267–9.

COEXISTENCE, COINCIDENCE, AND COHERENCE, 28, 29, 33–6, 58, 59, 68.

CONCEPTIONS: Lotze's view of, 59; Bacon's attitude toward, 157; relation to fact, 168; function in Greek philosophy, 342; (see Idea, Image, Hypothesis).

CONCEPTUAL LOGIC: as related to idea and image, 188–92.

CONSCIENCE: evolution of, 286, 287; ambiguous and transitional character of, 287; metaphysical implications of, as moral standard, 288; not autonomous, 288.

CONSCIENTIOUSNESS: dangers of, consequent upon ideal of self-realization, 316; Green's defense of, referred to, 316 note.

CONSERVATION: of energy and mass, 206; (see Energy).

CONTENT OF KNOWLEDGE: and logical object, originates in tension, 49; thought's own, 65; and datum, 69; as truth, 79 ff.; as static and dynamic, 73, 93 ff., 110 ff.; (see Study IV; Objectivity, Validity).

CONTINUITY, 10, 13, 55.

CONTROL: idea and, 75, 129.

CONVERSION OF PROPOSITIONS, 171; in relation to habit, 176.

COPERNICUS: his theory, 178; compared with Galileo's supposition, 179–81.

COPULA, 118 ff.; scheme of mediation between subject and predicate, 208, 214 ff.

CORRESPONDENCE: of datum and idea, 51; of thought-content and thought-activity, 70; as criterion of truth, 82 ff., 353 ff.

DARWIN, CHARLES, 146, 150, 179.

DATUM OF THOUGHT, 7, 8, 24; as fact, 26, 50, 52; Lotze's theory of, stated, 55; criticised, 56 ff.; relation to induction, 61; and content, 60, 70; (see Study III; Content, Fact, Stimulus).

DEDUCTION, 211, 212.

DEFINITION: invented by Socrates, 203.

DEMOCRITUS: attempts at definition, 203.

DEMONSTRATIVE JUDGMENT, 134.

DETERMINATION: as criterion of truth, 362 ff.; impossibility of complete, in finite experience, 364.

DEWEY, JOHN, 58 note, 86 note, 266 note 2, 316 note, 381 note.

DIALECTIC: Zeno as originator of, 203.

DIOGENES OF APOLLONIA, 222 ff.

DISJUNCTION: in judgment, 115, 138.

DYNAMIC: ideas as, and as static, 73, 76; reality as, 126.

EARTH: as an element, 213.

ECONOMIC JUDGMENT: involves same type of process as physical, 235; a process of valuation, 236; type of situation evoking, 241–6, 293–5, 302, 303; distinguished from ethical, 243 note, 246 note, 271, 302, 303; relation to physical, 246 note 3; subject of, the means of action, 259, 304; analysis of process of, 304–12; distinguished from "pull and haul," 237, 238; psychological account of, 310, 311; a reconstructive process, 311, 312.

"EGOISM, NEO-HEGELIAN," 316.

EHRENFELS, C. VON, 318 note.

EIDOLA: Bacon's view of, 157.

ELEATICS: their logical position, 216 ff.

ELEMENTS: as four, 213; as infinite, 213 ff.

EMERSON, R. W., 204, 246 note.

EMPEDOCLES: attempts at definition, 203; treatment of the One and the Many, 218 ff.

EMPIRICISM, 11, 29, 47, 48, 61 ff.; and rationalism, 80; criticised, 156; Jevons, 169; treatment of imagery, 186–8.

ENDS: controlling factors in acquisition of knowledge, 229; may themselves be objects of attention and judgment, 233; judgment of, inseparable from factual judgment, 234; conflict of, related, the occasion for ethical judgment, 238–41; indirect conflict of unrelated, the occasion for economic judgment, 241–3; the subject-matter of ethical judgment, 258, 259; definition of, the goal of all judgment, 264, 272; not always explicit in judgment-process, 269, 270; nature of relation between, in ethical judgment, 273, 274, 291, 292; types of factual condition implied in acceptance of, 275, 276; warranted by factual judgment, 276; nature of, unrelatedness of, in economic judgment, 293–5, 302, 303; (see Purpose).

ENERGY: principle of conservation of, 206, 299, 300; not valid in sphere of valuation, 328.

"ENERGY-EQUIVALENCE": principle of, in economic judgment, 308, 309; meaning of, 309 note.

EPISTEMOLOGY, 5–7, 10, 11, 13, 17, 18, 47, 73, 341; origin of problem of, 344, 345.

ERDMANN, BENNO: concerning induction, 173.

ERROR: criterion of, 371.

ETHICAL JUDGMENT: involves same type of process as physical, 235; a process of valuation, 236, 332; type of situation evoking, 237–41, 291–4; distinguished from mechanical "pull and haul" between ends, 237, 238; distinguished from economic judgment, 243 note, 246 note, 271, 302, 303; subject of, an end of action, 258; analysis of process of, 295–302; a reconstructive process, 295, 299.

EXISTENCE: *versus* meaning, 216, 217.

EXPERIENCE: duality of, 16; logic of, 19–21; how organized, 42; relation of thought to organization of, 43–8; as disorganized, 75; (see Absolute, Functions).

EXPERIMENT: as form of deduction, 212.

FACT: as equivalent to datum, 26, 50 ff.; criteria for determining, 106 ff.; as reality, 110; in relation to both idea and reality, 380 ff.; and theory, conflict between, 150, 151; mutual dependence of, 168; Whewell's view of, 163; (see Datum, Idea, Reality, Truth).

FACTUAL JUDGMENT: inadequate to complete mediation of conduct, 230–34; controlled by ends, 269; incidental to judgments of valuation, 272, 295; types of, implied in acceptance of an end, 275, 276; presents warrant for acceptance of ends, 277.

FITE, W., 331 note.

FRAGMENTARY, 72; as quality of internal meaning, 360, 361; as an attribute of finite experience, 364, 376; (see Stimulus, Tension).

FUNCTIONS: of experience, 16; logic of, 18, 23; distinguished from status, 16; of thought, 23, 24, 78, 85; total, as stimulus to thought, 36–8, 80; different, and logical distinctions, 42; different, confused by Lotze, 56; sensations as, 58.

GENETIC: method, significance of, 14, 15, 187; distinctions, importance of, 24, 53, 62, 71, 85; effect of ignoring, 53, 62, 71; (see Psychology).

"GOOD": practical significance of, as moral predicate, 259; relation to "right," 335.

GORE, W. C., 377 note.

GORGIAS, 225.

GREEK VIEW OF THOUGHT AND REALITY, 342 ff.

GREEN, T. H., 274 note, 288 note 3, 315 note, 316 note, 330, 331.

HABIT: relation of judgment to, interruption and resumption of, 154; and hypothesis, 170; and analogy, 176; and simple enumeration, 176; and conversion, 176; and logical meaning, 198; logical function of, 375, 376.

HERACLITUS: his position, 215 ff.

HIPPO, 209.

HOBBES, THOMAS, 301.

HOMOGENEITY: of the world-ground, 207; of the world, 209, 210.

HUTCHESON, F., 301.

HYPOTHESIS, nature of, VII, 143–83; unequal stress commonly laid on its origin, structure, and function, 143–5; relation of data and hypothesis strictly correlative, 145, 152, 168; as predicate, 146, 183; negative and positive sides of, 146, 155; came to be recognized with rise of experimentalism, 159; and test, 174, 175, 177 ff.; origin of, 170, 171 ff.; supposition and, 178; interdependence of formation and test of, 182.

IDEA: continuous with fact, 9, 10, 12; distinction from fact, 13, 110; Lotze's confusion regarding, 31, 32, 41, 65; association of, 33; contrast with datum, 52–4; functional conception of, 70, 112 ff.; objective validity of, 72–5; as entire content of judgment, 119; existential aspect of, 97, 99 ff., 113; in relation to reference, 97 ff., 103, 129; representational theory of, 100 ff., 113 ff., 141, 347 ff., 372 ff.; universality of, 97 ff., 113 ff.; as not referred to reality, 97 ff.; as forms of control, 129; function in judgment, 153, 154; distinguished from image, 183–93; distinction criticised, 199–202; problems accompanying discovery of, 341; in Greek thought, 342; instrumental and representative functions of, 346 ff., 372 ff.; purposive character of, 347 ff.; external and internal meaning of, 347 ff.; Royce's absolute system of, 348; triple relation to purpose in Royce's account, 349 ff.; logical *versus* memorial, 351; in relation to fact and reality, 379 ff.; (see Hypothesis, Image, Predicate).

IDEAS: Platonic, 247.

IMAGE: as merely fanciful, 53; in relation to meaning, 54; place of, in judgment, 154; distinction from idea, 189–93; distinction criticised, 199–202; as direct and indirect stimulus, 195–7.

IMAGERY: empirical criteria of, 186; function of, 187; as representative, 186–8, 194; psychological function of, 193–7; logical function of, 198, 199.

IMMEDIATE: as related to mediation, 342, 350 ff.

IMPRESSION: Lotze's definition of, 27, 28, 29, 32; objective determination of, 30, 31; objective quality of, 31, 68; as psychic, 53; as transformed by thought into meanings or ideas, 67 ff.; (see Idea, Meaning, Sensation).

INDETERMINATE: as quality of finite experience, 364.

INDUCTION: Bacon's view of, 157; by enumeration and allied processes, 171; and habit, 176; *versus* deduction, 211, 212.

INFERENCE: Lotze's view of, 60; in relation to judgment, 117.

INSTRUMENTAL: as character of thought, 78–82, 128, 140, 346 ff., 372 ff.; (see Purpose).

INTERACTION: physical, 218 ff.

INTEREST: direction of, 205.

INVENTION: form of deduction, 212.

JAMES, WILLIAM, 81 note, 352 note, 375.

JEVONS, W. STANLEY, 169, 173.

JONES, HENRY, 43 note, 59 note, 66.

JUDGMENT: Lotze's definition of, 59 and note; relation of, to ideas, 60; structure of, 75 note; Bosanquet's theory of, 86 ff.; as a function, 107 ff.; dead and live, 108; definition of, 86, 111; relation to inference, 116 ff.; limits of single, 123 ff.; negative, 114 ff.; of perception, 88 ff., 96; parts of, 118 ff., 207, 208; time relations of, 120 ff.; as individual, 136; as instrumental, 128, 140; as categorical and hypothetical, 136; as impersonal, 131; as intuitive, 139; various definitions of, 147 ff.; analysis of, 149 ff.; disjunctive, 155; psychology of, 153; purpose of, 154; and interrupted activity, 154; unique system of, 224–30; general analysis of, 230–32; purposive character of, 353 ff.; universal, 354; particular, 358; individual, 359, 360; mathematical, 354 ff., 370; (see Economic, Ethical, Factual judgments, Copula, Predicate, Reflection, Subject).

KANT, I., 43, 46, 60 note, 163, 263, 301.

KEPLER, 146, 181.

KNOWLEDGE: in relation to reality, 102 ff.; meaning and, 128, "copy" and "instrumental" theories of, 129, 140, 141; (see Judgment, Truth).

KÜLPE, O., 250 note.

LOGIC: origin of, 4; types of, 5–22; as generic and specific, 18, 23; relations to psychology, 14, 15, 63, 64, 184, 185, 192 ff.; effect of modern psychology upon, 345; relation to genetic method, 15–18; problems illustrated, 19, 20; social significance of, 20; eristic the source of formal, 203; pre-Socratic, 203; and epistemology, 341, 342; (see Epistemology, Psychology).

LOTZE: criticised, Studies II, III, IV; applied logic, 6; thought as accessory, 56; view of judgment, 147; similarity between him and Whewell, 165 note; quoted, 6, 28, 29, 30, 31, 32, 42, 56 note, 62, 63, 64, 66, 66, 67, 68, 69, 73, 77, 83, 84.

MANY: the, and the One, 210 ff., 218 ff.

MARGINAL UTILITY: principle of, 307, 337 note.

MARTINEAU, J., 262.

MATHEMATICS: certain forms of proof in, 172 ff.; judgments of, 354 ff., 370.

MCGILVARY, E. B., 257 note.

MEAD, G. H., 38 note, 337 note.

MEANING: and logical idea, 30, 31, 32, 33, 41, 97; as content of thought, 66 ff.; three types of, 68; as property of independent idea, 73–5; and association of ideas, 33, 80; and reference, 97; world of, 98, 103, 112; and knowledge, 89, 128, 190; equivalent to response, 198; *versus* existence, 216–18; inner and outer, 347 ff.; (see Content, Idea, Reference).

MEANS: as external and constitutive, 78; reapplication of, the problem of economic valuation, 242, 243, 246, 259, 260, 303, 304; objective in so far as not known adequately for one's purpose, 256; definition of, incidental to all judgment, 272; factual determination of, sometimes determinative of ends also, 270.

MEDIATION: in relation to the immediate, 350 ff.

MELISSUS: his dialectic, 214.

METAPHYSICS, 8, 9, 13, 18, 85; and logic of experience, 13; as natural history, 13–18; worth, 19–22; logical and, 72, 74; (see Epistemology, Logic).

MILL, J. STUART, 147, 160 ff., 162, 166.

MIXTURE: logical meaning of idea of, 219, 220, 222.

MONISM, 224.

MOORE, A. W., 76 note, 346 note.

MOTION: conservation of, 206,

NEGATION, 97, 114 ff.

NEO-HEGELIAN, 43, 316.

NEWTON, I., 146, 159, 179; his notes for philosophizing, 159 note.

Νόμῳ versus φύσει, 226.

NORMATIVE AND GENETIC, 16; (see End, Purpose, Validity, Value).

OBEDIENCE: a factor in genesis of morality, 257 (see also Authority and Custom).

OBJECT: how defined, 38, 39, 74, 76; socially current, 230; real, individual in significance, 230; nature of the ethical, 240, 328; of the economic, 259, 260, 328; (see Substance).

OBJECTIVITY: Lotze's view of, 68 (see Study IV); types of, 68; Lotze's distinction of logical and ontological, 72, 73; distinction denied, 341, 342; scope of conception of, 235; commonly denied to other than factual judgments, 247, 248; not a property of sense-elements as such, 248, 249; a category of "apperception," 250; a mark of the problematic as such, 250, 251, 255; not ascertainable by any specific method, 252; "obtrusiveness" as evidence of, 253; "reliability" as evidence of, 263; conditions of experience of, 253–6; conditions of, present in the ethical and economic situations, 257–60; a real characteristic of ethical and economic judgment, 261-3; not dependent on social currency, 318–20; nor on possibility of social currency, 320–24; nor on permanence, 324–9; (see Reality, Validity).

ONE: the, and the Many, 210 ff., 218 ff.

PARMENIDES: his logical position, 216 ff.; influence on Platonic-Aristotelian logic, 217.

PARTICIPATION: significance of, in Plato, 342 ff.

PARTICULARITY: of an idea, 99, 113; of a judgment, 358.

PERCEPTION: judgments of, 88 ff., 96.

PERFECT, THE, 126.

PHYSICAL JUDGMENT (see Factual judgment).

Φύσει versus νόμῳ, 226.

Φύσις, 207, 224.

PLATO, 53 note; on ideas and reality, 342 ff., 378, 379.

PLURALISM, 81 note.

POSITING: thought as, 68.

PREDICATE: how constituted, 75 note; in relation to reality, 101, 103; as hypothesis, 147, 153, 155, 156, 183, 186; develops out of imaged end, 232; interaction with subject, 232; in ethical judgment 258, 291–6; in economic, 259, 260, 309–11; (see Copula, Judgment, Hypothesis, Idea, Image).

PREDICATION, 118 ff.

PRE-ESTABLISHED HARMONY: in Royce's philosophy, 368.

PRESUPPOSITIONS, 204, 206.

PROBLEMATIC (see Tension).

PROOF: inductive, 172, 173; of hypothesis, 174, 175; relation of, to origin of hypothesis, 179–82; Wundt's view of, 177, 178.

PROPOSITION: and judgment, 118.

PROTAGORAS, 226.

PRUDENCE: ethical status of, as a virtue, 246.

PYTHAGOREANS, THE: their logical position, 216; use of experiment, 216.

PSYCHICAL: distinguished from physical, 25; Lotze's view of impression as barely, 27, 28, 30; view criticised, 31–4, 41, 42; two meanings of, 38 note; psychical mechanism, 31; idea as, 53; problem of logical and, 54 and note, 64; activity of thought also made, by Lotze, 77 and note; subjective result, 84; (see Impression).

PSYCHOLOGY: and logic, 14–16, 26, 63, 64, 153, 154, 184, 185, 192 ff., 345, 348; principle of, functional, 229, 230; genesis of, 280, 281; logical value of functional, 293.

PSYCHOLOGISTS' FALLACY, 37.

PURPOSE: logical importance of, 4, 9, 10, 13, 15, 20, 35, 58, 76, 80, 154; logical aspects of, Study XI; in an idea, 347 ff.; in judgment, 353 ff.; in criterion of truth and error, 361 ff.; origin of, as idea, 373 ff.; as method, 377; (see End, Reconstruction).

QUALES: of sensation, 55, 56, 60 note.

QUALITIES: primary and secondary, 221.

QUESTION: and judgment, 97, 114 ff.

RATIONALISM: criticised, 156 ff., 188 ff., 298 ff.

RATIONALITY: of world, 206.

REALITY: as constructed by thought, 94 ff., 104; as developing, 126; as including fact and idea, 108, 110, 125, 382; as independent of thought, 85, 87 ff., 104; as

subject of subject, 88 ff.; popular criterion of, 105 ff.; possibility of knowledge of, 91 ff., 102 ff., 125; for the individual, 94 ff., 103, 112, 224 ff.; as relative to judging, 149; as given in sensation, 160; "perception" and "recognition" coefficients of, 263–7, 277; these present in ethical and economical experience, 267–9; apprehension of, emotional, 263; scope of complete conception of, 235, 340; degrees of, 340; Platonic conception of, 343 ff.; Royce's conception of, 348; as related to fact and idea, 379 ff.; (see Fact, Truth, Validity).

REASON, SUFFICIENT: principle of, 206.

RECONSTRUCTION: the function of thinking, 38, 40, 46, 75, 76, 85; effect of denying this, 47, 71, 72; data and, 49 ff.; in judgment, 154; 291, 295, 299, 311, 312, 346, 347; (see Habit, Stimulus, Tension).

REFERENCE: as social, 74; problem of reference of ideas, 82 ff.; as meaning, 97 ff.; functional conception of, 113; paradox of, 99; idea as, 129.

REFLECTION: as derived, 1–12; naïve, 3, 9; subject-matter of, 7, 8; logic and, 3, 18, 23; *versus* constitutive thought, 43–8; distinguished, 255; general nature of, 269; end not always explicit in, 270; outcome of, statable in terms of end or means, 272; (see Judgment, Thought).

REFLECTIVE JUDGMENT, 134.

REPRESENTATION: as one of the two functions of an idea, 345, 347 ff., 372; significance of, in ideal reconstruction, 376.

RESPONSE: failure of, and origin of judgment, 154.

RESTLESSNESS: as source of reflection and purpose, 374 ff.; (see Tension).

RHETORIC: origin of, 203, 204.

"RIGHT" (see "Good").

ROYCE, JOSIAH: referred to, 76 note, 147; theory of ideas discussed, 346–82; quoted, 347, 348, 349, 350, 352, 353, 354, 355, 356, 357, 358, 359, 362, 364, 366 note, 368, 370, 371, 374, 379, 380, 381.

SATISFACTION: pause of, as marking attainment of truth, 362 ff.

SCHILLER, F. C. S., 327 note, 345 note.

SCIENCE: relation to naïve experience, 10, 11; its historic stages, 11, 12; distinction of logical procedure from epistemology, 13; same history as philosophy, 21, 22.

SELF, EMPIRICAL: genesis and content of concept of, 290, 292, 331, 332 note 1.

SELF, "ENERGETIC": implied in experience of "warrant," 277, 278; stimulus to development of concept of empirical self, 279–81; essential principle in all valuation, 281–5; evolution of moral attitude of reference to, 285–9; logical function of, in valuation, 296; important place in economic valuation, 308, 309; not capable of being described in terms of purpose or ideal, 313–16; Bradley's misinterpretation of, 332 note.

SELF-REALIZATION (see also Green, T. H.): theory of, as moral ideal futile, 298; logically congruous with determinism and hedonism, 330, 331.

SENSATIONS: logical import of, 57; as functions of experience, 58; as point of contact with reality, 90; place in judgment, 154; and ideas, 164 ff.; (see Impressions, Psychical).

SENSORI-MOTOR ACTIVITY, 193, 200.

SHAFTESBURY, 301.

SIGWART, C.: view of judgment, 147.

SKEPTICISM, 50 note, 85.

"SOCIAL CURRENCY": implies an identity of aspect of an object to different persons, 229; object having, an abstraction like social individual, 229; not a test of objectivity, 318–29.

SOCRATES: function of concept, 342.

SOPHISTS, THE, 225.

SPENCER, H., 248, 250 note 1, 315 note.

STANDARD (see also Predicate): identified with predicate in ethical judgment, 238–40; function of, in ethical judgment, 274, 299, 300; morphology and mode of reconstruction of, 296, 297; an ultimate ethical, impossible, 299; objectivity of, 300, 301.

STIMULUS: of thought, 7, 8, 17, 24, 37–40, 47, 81; Lotze's view of, 27, 29, 30; view criticised, 30–36; confusion of datum with, 61; defined, 75; and judgment, 153–4; as condition of thinking, 193 ff.; as direct and indirect, 195–7; of ethical judgment, 238–41, 291; of economic, judgment, 241–6, 302; (see Content, Datum).

STOUT, G. F.: referred to, 349.

STRATTON, G. M., 318 note.

STRUCTURE, 15, 16, 17, 18, 24, 75; (see Function).

SUBJECT: of judgment, how constituted, 75 note; as constructed by thought, 94 ff., 103; as a part of judgment, 118 ff.; as reality, 88 ff.; as inside and outside of judgment, 93, 96; functional theory of, 111, 125; as that requiring explanation, 208, 211 ff.; as modified by deduction, 212; given by analysis of situation, 232; interacts with predicate in judgment, 232; of ethical judgment, 258, 296–8; of economic judgment, 259, 260, 304, 309–11; (see Copula, Datum, Judgment, Predicate).

SUBJECTIVE: distinguished from objective, 25; Lotze's view of impressions as purely, 27, 28; view criticised, 31; definition of, 39; developed only within reflection, 52, 53; (see Psychical).

SUBJECTIVISM: in Lotze, 83, 84; in Royce, 360.

SUBJECT-MATTER OF THOUGHT: distinguished as stimulus, datum, and content, 7, 8, 24; confusion of these (genetic) distinctions, 17, 18; as antecedent, Study II; as datum, Study III; as content, Study IV.

SUBSTANCE: ethical theories based on logic involved in rationalistic conception of, 298, 299; meaning of concept of, 326, 327; type-form of conduct analogous to concept of a particular kind of, 327, 328.

SUBSTANTIATION: significance of Plato's, of ideas, 342 ff.

SUPPOSITION AND HYPOTHESIS, 178–81.

SWEET, HENRY: quoted, 153 note.

SYNTHETIC (see Reconstruction).

TAYLOR, A. E., 299 note 2, 315 note, 316, 324.

TELEOLOGY (see End, Purpose).

TEMPTATION: ethical, 238, 301; economic, 305.

TENSION: as stimulus to thought, 37, 38, 49, 50, 53, 70, 85; in relation to constitution of sensory datum, 53, 58, 59, 70; constitution of meaning as distinct from fact, 75, 85, 154, 237–46, 250, 251, 255, 291–5, 374 ff.; (see Purpose, Reconstruction).

THALES: his ἀρχή, water, 209; in relation to deduction, 212, 214.

THOUGHT: forms of, 58 ff.; as modes of organizing data, 63; three kinds according to Lotze, 68, 69; as positing and distinguishing, 69; validity of its function, 76–82; of its products, 82–5; instrumental character, 78–82; as discriminating sensory qualities, 200–202; (see Judgment, Reflection).

TIME: as involved in judgment, 120 ff.

TRANSCENDENTALISM, 29, 43–8.

TRENDELENBURG, A.: view of judgment, 147.

TRUTH: criterion of, 84; Bosanquet's conception of, 105; popular criterion of, 105 ff.; and purpose, Study XI; representational *versus* teleological view of, 341 ff.; criterion of, 361 ff.; (see Objectivity, Validity).

UEBERWEG: view of judgment, 147.

UNIFORMITY: of nature, 206.

UNITY: of the world, 207.

UNIVERSAL: first and second according to Lotze, 56, 59, 69; ideas as, 97 ff., 113; judgment as, 136; Mr. Royce's treatment of, 354 ff.; necessity and, 357.

VALIDITY: of thought, 7, 8; relation to genesis, 14, 15; test, 17, 18; defines content of thought, 24; problem of, Study IV; Lotze's dilemma regarding, 71–85; of bare object of thought, 72–6; of activity of thought, 76–82; of product of thought, 82–5; (see Objectivity, Reality, Truth).

VALUE: Lotze's distinction of, from existence, 28, 29; view criticised, 31, 41, 45; organized, of experience, 42–8; determined in and by a logical process, 233; nature of consciousness of, 273, 333–5; function of consciousness of, 335–7; properly mediate and functional in character, 338–40.

VALUATION (see also Ethical judgment, Economic judgment): includes only ethical and economic types of judgment, 227, 236, 338–40; general account of process of, 272, 295; reconstructive of self as well as of reality, 312.

VENN, JOHN: origin of hypothesis, 169.

"WARRANT": consciousness of, accompanies purely factual as well as valuational judgment processes, 276, 277; the constitutive feature of survey of factual conditions, 278, 279.

WELTON, J.: origin of hypothesis, 171.

WHEWELL, WILLIAM, 163; view of sensations and ideas, 164, 165; of induction, 165; a certain agreement between him and Mill, 166.

WIESER, F. VON, 335 note 2.

WILL: as related to thought, 366 note; (see Activity, End, Purpose).

WUNDT, W.: view of judgment, 147; view of mathematical induction, 173; formation and proof of hypothesis, 177 ff.; distinction between supposition and hypothesis, 178 ff.

"WRONG" (see "Bad").

XENOPHANES: his logical position, 216.

ZENO: his dialectic, 214.

What is function of analysis & synthesis
actually men is thinking & how they are
related & each other.

Universe of discourse. What is relation between subject of discourse & universe of discourse. What is function of statement.

The statement is itself a functional relationship.